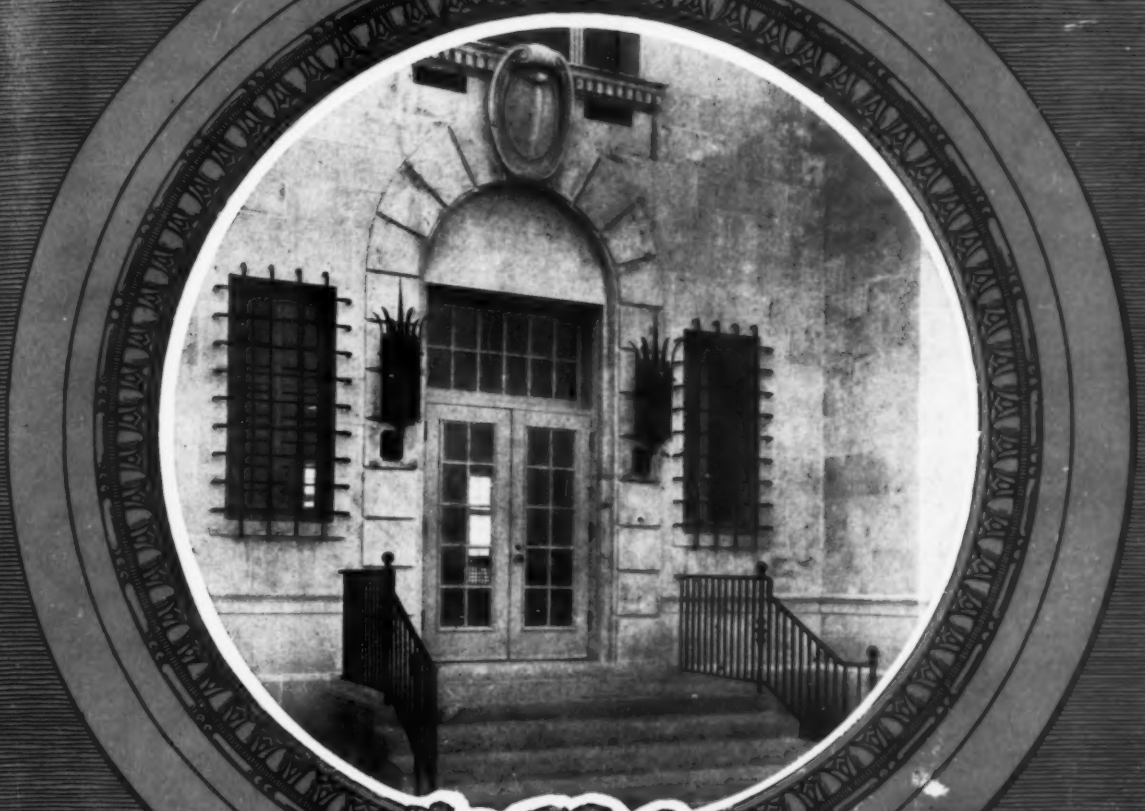

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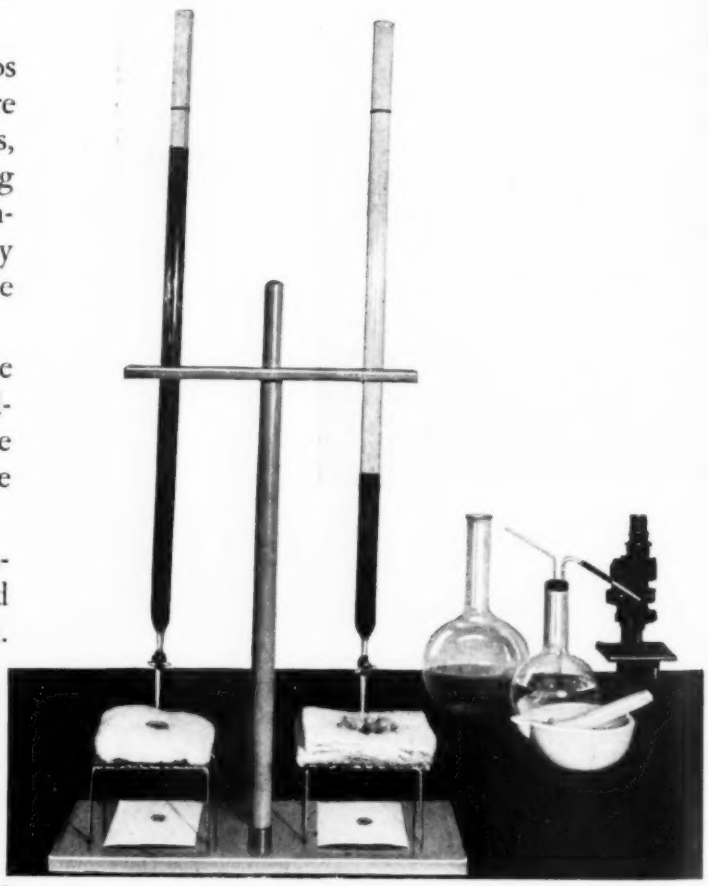

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CONTENTS

For February, 1929

COVER PAGE—Entrance to Out-Patient Department, Tampa Municipal Hospital, Tampa, Fla.

ORIGINAL ARTICLES

Community Chests and Hospitals—The Underlying Facts 49
Michael M. Davis, Ph.D.

How to Combat the Evil of Noise 54
Donald A. Laird, Ph.D., Sci.D.

Controlling Fire and Explosion Hazards of Anesthetics 59
Charles H. Wardell, Jr., Ph.B.

Unusual Features Characterize New Wing at Homeopathic Hospital 64
James R. Mays

Meeting the Cost of Accident Cases 67
Rev. John G. Martin

An Analysis of Hospital Earnings 69
James S. Parker

How Success Was Achieved in Drive for Negro Hospital 73
Francis Fisher Kane

Choosing Personnel 79
L. C. Austin

Why Hospitals Merit Support 82
Harold L. Foss, M.D.

Providing Private Room Facilities for Tuberculous Patients 85
Robinson Bosworth, M.D.

A Proposed Bureau of Hospital Research 89
Carl E. McCombs, M.D.

(Continued on page 4)

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CONTENTS

According Cheese Its Rightful Place in the Hospital Dietary..... 122
Dahy B. Barnett, B.S.

Giving the Student Nurse the Social Health Viewpoint..... 130
Alma Foerster

Clinic Rhymes and Doctors' Times..... 136

STUDIES ON HOSPITAL PROCEDURES
Small Hospital Finances..... 91

EDITORIALS
Meeting the Need of the Middle Class Patient..... 98
Looking in the Mirror..... 98
A Practice That Undermines Hospital Morale..... 99
A Neglected Obligation..... 99
Winning the Employees' Support..... 99

TALKING IT OVER..... 100

YOUR EVERYDAY PROBLEMS..... 101

NEWS OF THE MONTH..... 104

NURSING AND THE HOSPITAL
Giving the Student Nurse the Social Health Viewpoint..... 130

DIETETICS AND INSTITUTIONAL FOOD SERVICE
According Cheese Its Rightful Place in the Hospital Dietary..... 122

OUT-PATIENT SERVICE
Clinic Rhymes and Doctors' Times..... 136

HOSPITAL EQUIPMENT AND OPERATION
A Successful Call System for Doctors and Interns..... 140
A House Telephone System That Saves Time and Annoyance..... 142
Choosing Electrical Equipment for the Modern Hospital..... 142
Bed Bumper Is Easily Applied..... 146
New Pressure Tank for Filling Grease Guns a Time Saver..... 146
Effecting Economical Heating by the Use of Domestic Stokers..... 148
Green Light for Locating Nurse Is Innovation..... 152

(Continued on page 6)

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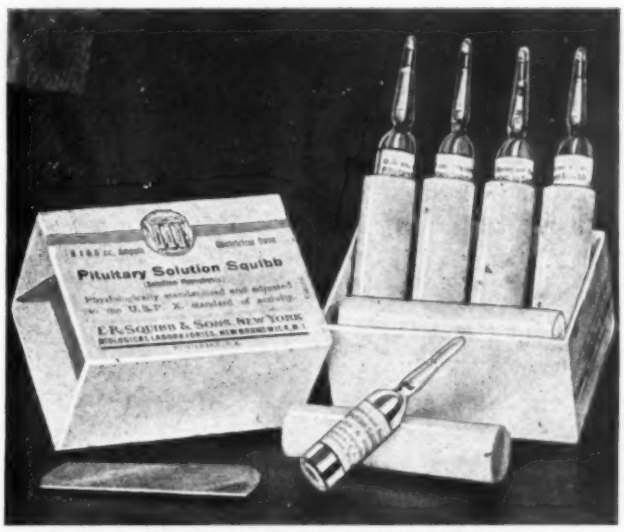

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CONTENTS

(Continued from page 4)

MISCELLANEOUS

American and Foreign Hospitals as an Architect Sees Them 53
Giving a New Viewpoint to Trustees 63
How Is the Success of the Woman Superintendent Gauged? 63
Eliminating Fire Hazards in the Hospital 66
Solarium Promotes Threefold Program 68
Three Major Functions of the Protestant Hospital 72
The Responsible Nurse Is the Interested Nurse 78
Information on Nursing Available in Libraries 78
Financing Hospitals in the Australian States 78
What Does the Staff Owe the Hospital? 81
Mental Hospitals Crowded—Number of Patients Increasing 81
Nurses To-day Are Overeducated, Physicians' Committee Holds 84
Qualifying as the Superintendent of a Small Hospital 84
Compensation Should Cover Hospital Charges, Board Rules 84
Success of Hospital Depends Upon Medical Staff 90
Making the Hospital Human 138

INDEX TO ADVERTISERS 9–10
POSITIONS WANTED (CLASSIFIED ADVERTISEMENTS) 162
POSITIONS OPEN (CLASSIFIED ADVERTISEMENTS) 164
CLASSIFIED DIRECTORY OF ADVERTISERS 201, 203, 205, 207, 208

THE MODERN HOSPITAL

A Monthly Journal Devoted to the Building, Equipment and Administration of Hospitals, Sanatoriums and Allied Institutions, and to Their Medical, Surgical and Nursing Services

Vol. XXXII *February, 1929* No. 2

Community Chests and Hospitals—The Underlying Facts

By MICHAEL M. DAVIS, Ph.D.
New York

COMMUNITY chests as organizations for collecting philanthropic funds through one united annual effort, rather than by a multitude of appeals from individual welfare societies existed in this country before the war. Their growth, however, is a postwar phenomenon. Numbering hardly a dozen in 1918, by 1928, 325 cities had established community chests which, according to William J. Norton, Detroit, raised over $64,000,000 in their 1927 campaigns.

Chests now exist in nearly 60 per cent of the 311 cities in the United States having over 25,000 population and in nearly two-thirds of all cities with over 50,000 population; and the number of chests is increasing yearly. These facts suggest that the relations of hospitals and chests cannot be dealt with as local or transient questions or in terms of likes and dislikes. These relations really depend upon certain facts that underlie and determine the attitude of the men and women connected with these two groups or organizations. What are these underlying facts? This article endeavors to answer this question, at least in a preliminary way.

The purpose of the community chest is to plan how best to raise and then actually to raise money to support philanthropic work, and to distribute this money to accepted philanthropic institutions, on some equitable basis. There must be a proved financial need on the part of the philanthropic institution on the one hand, and a financial policy on the part of the chest that will enable it to meet this need so far as the chest resources permit. The hospital's financial need on the one hand, and the chest's financial policy on the other, need to be defined and compared.

In 1924 Raymond Clapp, Cleveland, made a study of the volume and cost of social work in nineteen cities, giving rather complete statistics of the source of income and amount of expense of the various social agencies in these cities, including, of course, the hospitals and other health activities.

In 1925 and 1926 the Bureau of Municipal Research, Rochester, N. Y., made a complete study of the finances of the various social agencies of that city on a basis similar to that used in Mr. Clapp's study.

In New York City figures from the United Hospital Fund, dealing with fifty-six hospitals, are available, showing comparable data for 1927. No governmental hospitals are included.

The figures collected by the Duke Endowment from many hospitals of North and South Carolina for the year 1926 are also available. In the figures given below, nongovernmental hospitals are included.

The differences between the four hospital groups are largely due to differences in the proportion of tax-supported hospitals. From the standpoint of this paper, the similiarities are more important than the differences. The significant point comes out when we compare the financial need of hospitals as shown in this table, with that of other types of social agencies. Visiting nursing organizations, for example, one of the most important forms of noninstitutional health service, show earnings of only 12 per cent

of their total income in the nineteen cities Mr. Clapp studied. Charity oranization societies and other agencies doing case work or furnishing relief to families in their homes, must show an even lower ratio of earnings.

For purposes of comparison the results of the above studies have been tabulated and are shown in the accompanying table.

TABLE SHOWING SOURCES OF INCOME OF VARIOUS SOCIAL AGENCIES

	Clapp Survey in 19 Cities, 1924	*Bureau of Municipal Research, Rochester, 1925-26*	*United Hospital Fund, New York City, 1927 (56 hosp.)*	*Duke Endowment and N. Carolina, 1926*
Income earned from patients	62%	51%	66.8%	59%
Income received from payments of tax funds for care of patients	26½%	29%	3.2%	10%
Income from endowments	3½%	3%	14%	3%
Income from contributions, including allotments from community chests	8%	17%	25%	28%

In comparison with most other organizations aided by community chests, the hospital has relatively a much smaller need for contributions in proportion to its total income or expenditure. This of course is because of the large earning power of the hospital from paying patients. The use of hospitals by full-pay and part-pay patients has been increasing relatively to the number of free patients. The proportion of earned income in the hospitals of the United Hospital Fund of New York has doubled in the past twenty years.

Thus far we have defined the hospital's financial need only in comparison with that of other charitable organizations. The definition must, however, be made in direct as well as in relative terms. If we study the financing of hospitals we may obtain some facts as to the total amounts of money collected by hospitals from their communities for all purposes. Thus in New York City the thirty-one hospitals that have been members of the United Hospital Fund since 1916 received during these twelve years, average yearly contributions to current expenses of $2,034,982, an average yearly increase in endowment of $1,782,565 and an average annual addition to the capital invested in their land and buildings of $2,038,084. In other words, the total amounts donated or, it might be said, allocated by their communities to these thirty-one hospitals averaged $6,000,000 annually. The striking fact then appears that only little more than one-third of this was contributed to current expenses, while nearly two-thirds represented addition to the capital investment or endowment.

A recent study of the Jewish hospitals in New York City, a rapidly growing group, showed that in the years 1920-28 the seventeen institutions concerned had taken from their communities in capital funds for improvements, enlargements and similar purposes, approximately $2,000,000 a year, whereas during the same eight years the total amounts drawn in gifts to meet that part of the current expenses not covered by earnings or endowments were not over half that sum.

In hospitals that are not growing so rapidly the proportion of gifts needed for capital purposes to those needed for current expenses is smaller, but is still strikingly large as compared with nearly all other types of noncommercial organizations, except colleges and universities. Thus the 1926 report of the hospital section of the Duke Endowment shows that of the thirty-nine hospitals in North and South Carolina reporting to the endowment (excluding tax-supported institutions), the capital outlay was almost $500,000, exclusive of interest on debts, while the money secured as gifts or tax grants to these institutions was $730,000 in the same year.

A large number of hospitals, especially in the Middle West, have little or no endowment, yet perform a certain amount of wholly free work for poor patients and a considerable amount of service for patients of slightly larger means who cannot pay the full cost of their care. The deficit incurred in these ways, however, is as a rule largely and sometimes wholly made up by the surplus from private patients, so that these hospitals need to turn to their communities only for small gifts for current maintenance.

Capital Funds Prime Need of Hospitals

The increased use of hospitals by the population has required and will probably continue to demand large sums for the modernization and enlargement of old plants or the building of new ones. There is also considerable expenditure for certain kinds of equipment, concerning which it would be difficult to decide whether it should be called capital or current expense. A new x-ray apparatus or an electrocardiograph are examples. Everyone familiar with hospital management knows that the need for capital funds is an important and continuous feature of hospital financial policy. The need of contributions to meet current expenses is often unimportant or almost negligible in comparison.

The nature of the financial need of hospitals can now be summed up as follows: (1) The hospital is much more nearly self-supporting than most kinds of welfare agencies and needs only a relatively small amount of annual gifts to current expenditures; (2) the hospital needs large sums for capital expenditures, which often overshadow its needs for gifts for current expenses.

It is not necessary to quote statistics to define the financial policy of community chests. Nearly all chests confine their financing to current expenditure. The money they raise is given to participating organizations on the basis either of a charitable service rendered or of deficits incurred for current charitable work. In any case it is essentially a gift towards current expense and not towards capital. In only a few instances have community chests undertaken to finance capital needs. In Saginaw, Mich., the community chest undertook to raise capital funds for two hospitals. For several years it annually included definite and substantial sums for this purpose in the amount for which it appealed to the community. The full capital quota thus asked for was not secured at any one time, but more was obtained each year, so that one of the hospitals is now finished and the other in process of erection. Apparently both institutions will be completed after about six years of such financing. In Detroit a five-year project was undertaken by a community fund, the aim being to raise $10,000,000 for buildings. Such limited success attended this attempted capital financing, however, that the plan was abandoned.

Chest Must Approve Appeals for Capital Funds

There are other "chest cities" in which, while no attempt is made to raise capital funds in the annual campaign of the chest, it is nevertheless understood by the constitutent organizations that appeals for capital will not be made to the public until the appropriate committees of the chest have passed upon their merit. The strength of the chest in such cities makes it difficult for any organization to appeal successfully for capital funds if it does not possess the approval of the chest. Many of the chief money raisers in capital fund campaigns for hospitals and other institutions are men who are also very active in the local chest. Chests also have often used their influence to "stagger" the various capital account campaigns over a period of time in such a way as to interfere as little as possible with one another or with campaigns for current expenses.

In general, the financial policy of community chests can be defined as follows: (1) Chests raise money to help meet the current expenses of their participating organizations; (2) they have thus far dealt but slightly with capital financing.

If we place in parallel columns the two statements or definitions of hospital financial need on the one side and the chest's financial policy on the other, we see at once that the typical chest is but little concerned with a matter of major financial importance to many hospitals, namely, capital financing, while, on the other hand, the financing of current deficits, a matter of preponderating importance to chests and to most social agencies, possesses only a secondary interest to many hospitals. This fundamental contrast between the financial need of hospitals on the one side and the financial policy of chests on the other, underlies and interprets all the discussions between the hospitals and the chests.

Why Hospitals Do Not Benefit Greatly

It also offers a partial explanation of the fact that in many communities hospitals are not participating organizations within the local chest. Of the 285 chests of the country only 52 per cent (from the records of the national Association of Community Chests and Councils) contributed to hospitals. This low percentage is partly accounted for by the fact that some "chest cities" have no community hospital except one supported wholly by taxes. The percentage is found to vary widely in different sections of the country. Thus in the Northeast, 62 per cent of the chests included in their budgets some allotments to hospitals (exclusive of chests that gave to out-patient departments only). In the Southeast the proportion is 53½ per cent, in the West only 42 per cent. The contrasts between the East, the South and the West are also to be explained by the fact that Western hospitals generally make a larger proportion of their expenses in earnings from patients or in tax grants and often need nothing in the way of current gifts.

An estimate has been made of the proportion of hospitals' current expense borne by community chests. Statistics from 131 cities, including 85,078 hospital beds, show that the funds received from the chests amounted to only 5½ per cent of the estimated total current expenses of these hospitals. Since the actual expenses were often not reported, an estimate was made on the basis of $1,500 per year per bed. This gave a gross current expense to these hospitals of $127,617,000. The chests' appropriation to hospitals in these cities was $6,741,824.

The small proportion of current hospital expense borne by the chests obviously reflects the relatively small amount of the hospitals' total

expense not covered by earnings or endowment. This point is again emphasized by geographical differences. Thus in the cities in the Northeastern states, the proportion of hospital expenses covered by chests was 7 per cent, but only 2¾ per cent in the Southern and 2½ per cent in the Western cities. Of the total amount of money raised by the 131 chests, 14 per cent went to hospitals, the percentage in the Northeast being 19 per cent, in the South 11 per cent and in the West only 6 per cent. From the same 131 cities, figures even more significant of the relation between capital and current expenses have also been derived.

The number of additional beds added to the chest hospitals in the 131 cities was secured from data in the hospital directories of the American Medical Association, and it was assumed that the 23,637 new beds added during the ten years represented a capital investment of $5,000 per bed. This, of course, does not take into account the very extensive additions to capital involved in rebuilding old plants with little increase in the number of beds, or in building nurses' homes, outpatient departments and so forth, not affecting bed capacity. The capital investment estimated at $5,000 per bed is therefore probably below the truth. Column 4 of the accompanying table shows that the average capital invested per year was $11,818,500, while the next column shows that the average yearly appropriation by the chests to the hospitals was $6,741,824. Thus the annual contributions of the chests to current expenses constituted only slightly more than half (58 per cent) of the amount raised by the hospitals from their communities for new capital, and expended by them in enlarging bed capacity. Another way of stating this fact is, that the average total sum raised for hospitals annually from the people in these 131 cities was, in round numbers, $18,500,000, of which two-thirds was for capital purposes and slightly more than one-third was for current expense purposes.

The chest as a money raising organization was instituted primarily to raise funds for current expenses of philanthropic work and it has learned by experience the lesson that capital funds and current funds cannot be raised in the same campaign or in the same way. Experience has shown that capital funds for building or endowments must generally be obtained from a relatively small number of well-to-do persons. While many of the chests have been highly successful in securing contributions for current expenses from thousands of small as well as from a relatively few large givers, no campaigns for capital funds can be successfully carried through unless the prime dependence is on a small and generous group of donors. The methods of obtaining capital funds are therefore different from those used in the campaign or "drive" for current expenses.

A considerable part of the funds secured by hospitals for building and endowments is derived not from direct appeal but from legacies. From the standpoint of financial policy and methods of money raising, the interests of hospitals thus lie predominantly in the direction of obtaining capital funds, whereas the policy and methods of community chests have been in another direction.

Thus it is fair to point out that the community chest has not solved, indeed it is only beginning to grapple with a major problem of hospital financing—how to obtain capital funds. On the other hand, those interested in hospitals may well recognize that these limitations of the community chest may be only those naturally connected with the newness and rapid growth of so young a movement. It is wise to recognize what chests have not accomplished, but it would be unsafe to predict what they may or may not achieve in the future. It is well to appreciate that the contribution of the community chest has not been merely financial. There is no doubt that in many cities it has developed a unity and spirit of cooperation among both givers and receivers of funds, that it has awakened or stimulated the philanthropic interest of many persons who formerly had not the habit of giving and that with these imponderable but none the less significant influences on community spirit, the chest may be able to move forward to larger and more constructive dealing with the whole problem of community financing, despite the fact that thus

TABLE SHOWING RELATION BETWEEN HOSPITAL'S CAPITAL AND CURRENT EXPENSES IN 131 CITIES

Region	*Number of Cities*	*Increase in Beds 1918-1927*	*Capital Investment @ $5,000 per Bed*	*Average Capital Expenditure per Year for All Hospitals*	*Average Yearly Chest Appropriation to Hospitals*	*Per Cent Contribution of Chest to Capital Expenditure*
Northeast	86	16,084	$80,420,000	$8,042,000	$5,453,506	68%
Southeast	24	2,730	16,650,000	1,313,000	529,161	40%
West	21	4,823	24,115,000	2,411,500	759,157	36%
Total	131	23,637	$118,185,000	$11,818,500	$6,741,824	58%

far it has dealt mostly with one side of the matter.

Hospitals, for their part, render a fundamentally necessary and appealing service which has a deep hold upon the understanding and sentiment of the public. Rightly utilized and developed the appeal of hospitals may be of value not only to themselves but to the whole development of community giving, in the advancement of which all philanthropic institutions have a common and profound interest.

The facts presented in this article suggest that many hospitals can hardly be expected to be greatly impressed with a method of financing that does not grapple with one of their major problems and may even limit them in their efforts to raise capital funds. Clearly, chests must devise some method of dealing with the financing of capital funds or must cooperate in devising methods whereby individual hospitals or groups of hospitals proceed with their capital financing with freedom and effectiveness. Let any chest city analyze the financial need of the local hospitals for capital and for current funds over a period of years, and the nature of the chest's financial policy during the same time. Both groups should then be in possession of facts that will enable them to view their mutual relationships impersonally. Above all it is important to remove the matter from the area of impressions, ambitions and recriminations.

How Hospital Executives May Aid the Special Duty Nurse

Because private duty nurses are so important and so vital a part of many hospitals, it is well for hospital executives to arrange to make things easier for them by making needed supplies, medications and other information readily accessible, an article in the *Trained Nurse and Hospital Review* points out.

Suggestions that may be of benefit are as follows:

A box, on the order of a suggestion box, into which each special duty nurse may drop a statement of the problems she meets with in the institution. A discussion of these problems by proper authorities will tend to solve some of the difficulties of the private duty nurse.

Rules and regulations for the special nurse placed in the routine books on the wards.

Assigning to some definite person the duty of helping the new special nurse.

A feeling of responsibility on the part of the head ward nurse to keep her ward supplies up to standard so that the night force will not have to run from ward to ward for supplies.

A shelf or two in a cupboard on the wards for the use of the private duty nurse.

A definite assignment for the placing of linen in rooms to cover any likely emergency at night.

Medications on the floors arranged in the most logical order possible: a list of medications in alphabetical order and the arrangement posted on the inside of the medicine door.

American and Foreign Hospitals as an Architect Sees Them*

The first publication of "The American Hospital of the Twentieth Century" in 1918 called forth warm appreciation, for the book stood practically alone as a treatise on modern hospital architecture in America. Since that time the barren field of hospital literature has not been enriched by any notable works, although the period has been marked by rapid growth and development in hospital planning and the interest in the subject has correspondingly increased.

The second revised edition of Mr. Stevens' book, just published, should therefore win for its author further appreciative acknowledgment for it elaborates and adds to the valuable material originally published.

The book consists largely of an instructive collection of floor plans, pictures and information concerning outstanding examples of hospital and medical buildings, mainly American, although plans and discussion of some European hospitals have been introduced for purposes of study and comparison.

Historical Statement on Hospitals

A brief historical statement on the evolution of hospital buildings and equipment leads off the book. This is followed by discussion on the factors that should influence the choice of a hospital site, orientation, types of buildings, principles of planning and the influence of European hospitals on American institutions.

Following this preliminary discussion, Mr. Stevens, in a comprehensive way, with discussion and illustrations, treats, one by one, the different medical departments of the hospital, as well as the business and service departments.

The increasing use of physiotherapy is recognized by a fuller discussion of the facilities for this type of medical treatment than was included in the last edition of the book. The chapter on research laboratories has also been expanded, as has the chapter on the service building.

Since the first edition of Mr. Stevens' book appeared there have been developed in America several notable examples of the medical school and hospital combination, known as the medical center. A chapter is therefore devoted to this subject, well illustrated by plans and pictures of outstanding medical centers.

Another new chapter is that on general hospitals, which covers points not taken up under any special subdivision.

The volume is liberally illustrated and the floor plans reproduced are simple outline drawings, from which all working details have been eliminated, making them readily intelligible to the lay reader.

This book gives the impression that there is a vigorous creative spirit abroad in modern hospital planning. In his foreword to the third edition Mr. Stevens says: "The great problem in hospital architecture is not merely housing the sick, but housing them in such a way that every scientific method may be used for their betterment and recovery. The theory of hospital construction is a living thing, changing from year to year as medicine changes. The designing of a hospital building should be considered a sacred trust, since the life or death of a patient may depend upon the facilities for caring for him."

*The American Hospital of the Twentieth Century, by Edward F. Stevens, architect, Boston. Published by the F. W. Dodge Corporation, New York, 1928.

How to Combat the Evil of Noise

By DONALD A. LAIRD, Ph.D., Sci.D.
Director, Colgate Psychological Laboratory, Hamilton, N. Y.

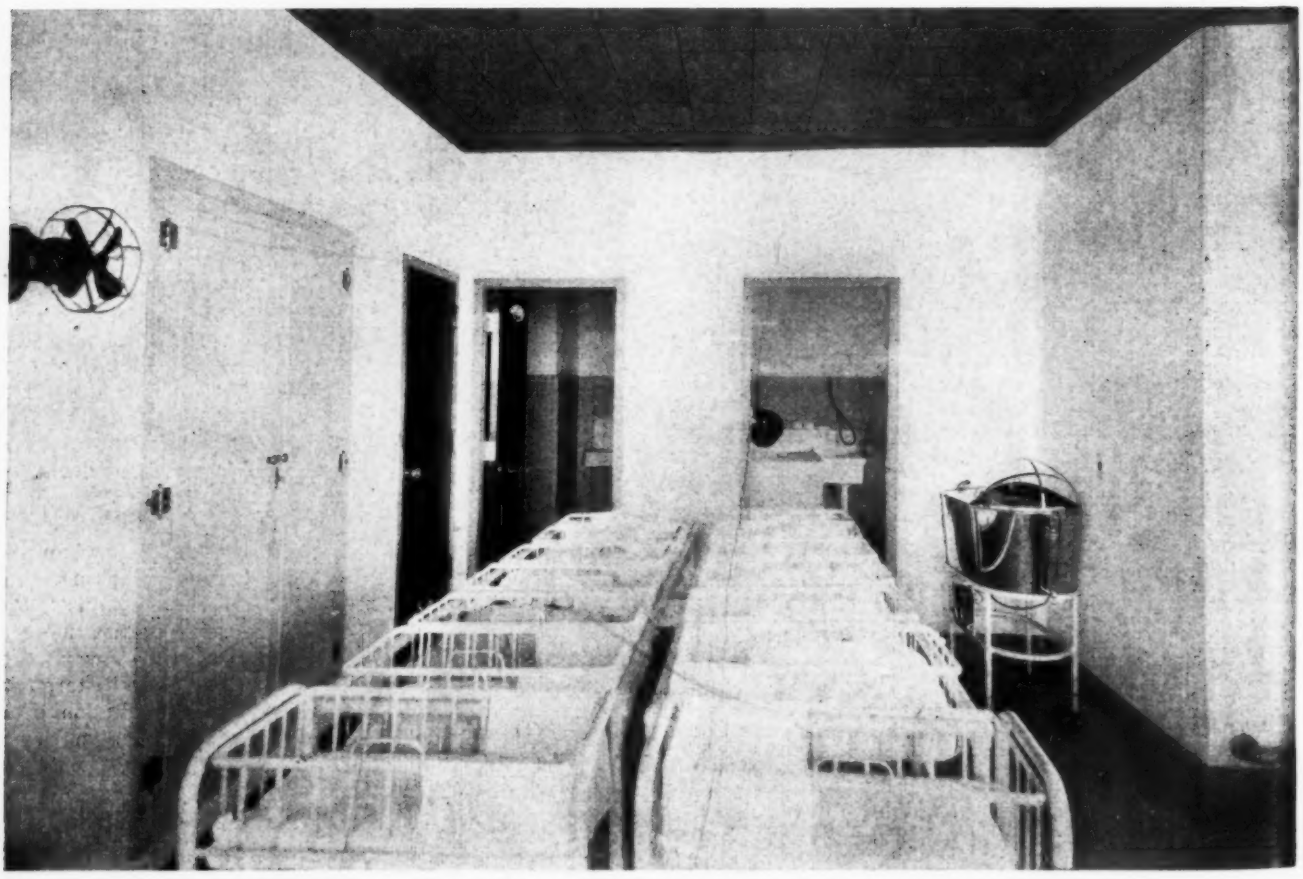
IT HAS been long admitted that the control of noise in hospitals is more than an incidental problem. Wires have been stretched and rows of unstoppered bottles have been built into partitions in an attempt to control noise. Research, first linked with the name of the late Wallace Sabine of Harvard, has demonstrated the futility of these methods and has shown that the solution of the problem is much less complicated and uncertain.

Before discussing the control of hospital noise let us first see why it should be controlled. Clinical observation has indicated that patients are more quickly restored to health when they are protected from upsetting noises and the usual city din. Recent experimentation demonstrates that noise causes the fear reaction.

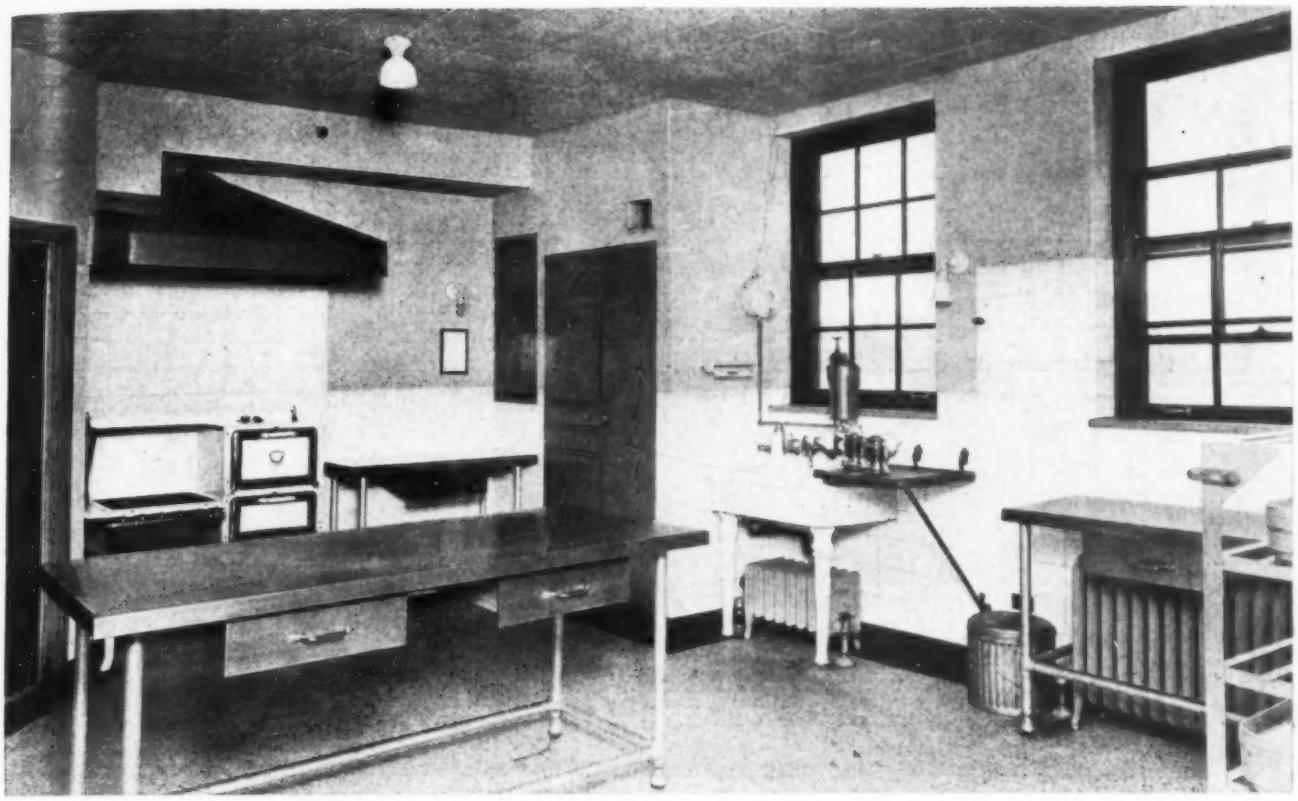
The elements of the fear reaction of especial interest to the physician are the slight increase in tonus of voluntary muscles, altered blood pressure, diminution of the flow of digestive secretions and a paralysis of most of the intestinal tract.

In making a basal metabolism test and in reading blood pressure it is considered desirable to have a quiet chamber for the patient, since the stimulation of a slight fear reaction by noise will yield readings that do not represent the patient's real condition, although it is significant that these allegedly falacious readings may represent the conditions under which the patient has to go through life.

Since the neural centers controlling the fear reaction are in the brain stem, over which there is no voluntary control, it is obvious that even if the hospital patient thinks he is accustomed to noise from having worked and lived amidst it for years, the fundamental fear reaction is likely to



Sound absorbing material has been applied to the ceiling in the nursery at St. John's Hospital, Tulsa, Okla.

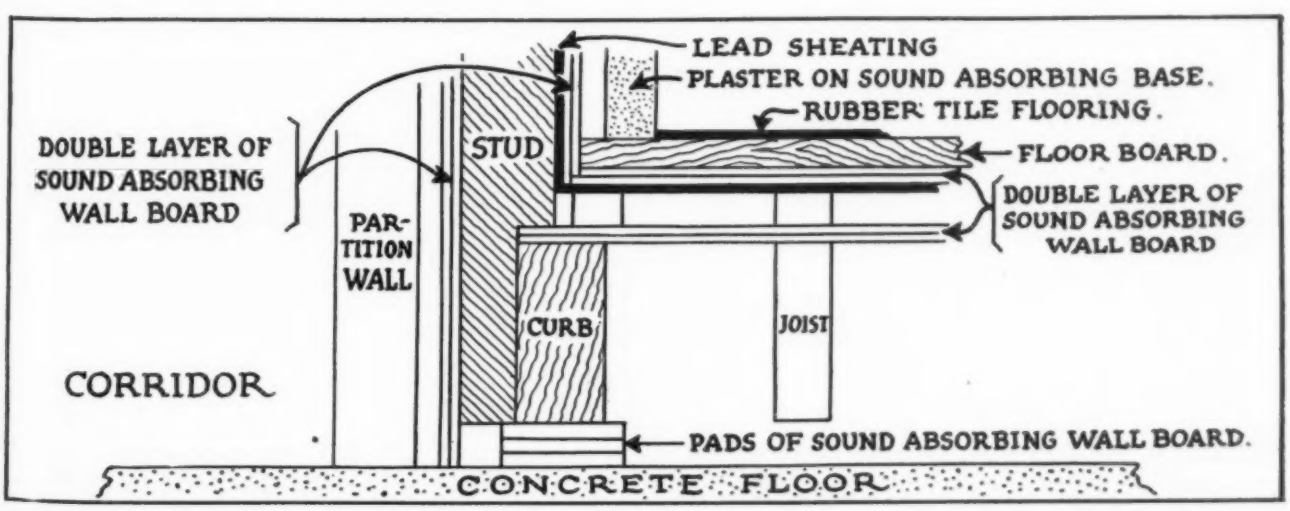


Noises from the diet kitchen at Michael Reese Hospital, Chicago, do not spread through the near-by rooms as much as they would without the sound absorbing material on the ceiling.

persist even when the noises are consciously ignored.

This has been admirably demonstrated in experiments in the sleep laboratory at Colgate Pyschological Laboratory. The noise of a passing truck will raise the systolic blood pressure of the sleeper by as much as 20 mm. without the sleeper showing the least indication of having been awakened. We have also seen the galvanometer needle on a special hook-up for measuring muscular tension indicate a great increase in the tension of voluntary muscles when a truck passes, when another sleeper in the room coughs or when a window on the same side of the building is slammed. Yet the sleepers are not awakened. Sleep, however, does not prevent the fear reaction and obviously does not prevent the increased metabolism rate, necessary to sustain the increased tonus, or prevent the added work thrown on the cardiac system.

Within limits, one is safe in stating that moving the patient to a quieter room will lower his blood



Construction detail showing how a room can be built so that the noise inside a room cannot be heard in adjacent corridors.

pressure and reduce energy consumption, and that his appetite and assimilation of food will be better in the quieter room, because his intestinal tract and glands will be free from the ill effects of a paralysis.

The control of hospital noise presents several aspects. Many hospital activities are noisy, but in many institutions still greater annoyance is caused by outside noises from trolleys, trucks and similar sources of noise.

Before a hospital site is selected it is wise to consider the quietness of the natural surroundings. It is always desirable for a hospital to be surrounded by great open spaces. Not every hospital in a metropolitan district can have the idyllic rural location of the Lake County Hospital, Waukegan, Ill., but effort should be made to approximate it. The future growth of the neighborhood should also be anticipated. The U. S. Marine Hospital No. 5, near the Wilson Avenue district in Chicago is a case in point. When it was built this hospital was practically in the country, now it is in the midst of an overgrown and hustling business center, and a continual stream of heavy traffic passes its doors day and night. A permanent zoning ordinance should always be considered in connection with the selection of a site.

Within the hospital conditions are more easily regulated and there is little excuse for noise within the building. Internal control of noise has two distinct phases—the prevention of noise, by such means as the use of rubber heels on shoes, and the absorption of noise by means of special construction.

The absorption of noise is perhaps the more important, since hospitals cannot demand that all visitors wear rubber heels or prevent the delirious patient from being noisy or the patient coming out from under an anesthetic from knocking over his bedside table.

Scientific noise absorption methods were first developed by Wallace Sabine. It was found that ordinary walls reflect sound better than a mirror reflects light. The consequence is that sound in a room or corridor persists for several seconds after it is originated. The reverberation in many

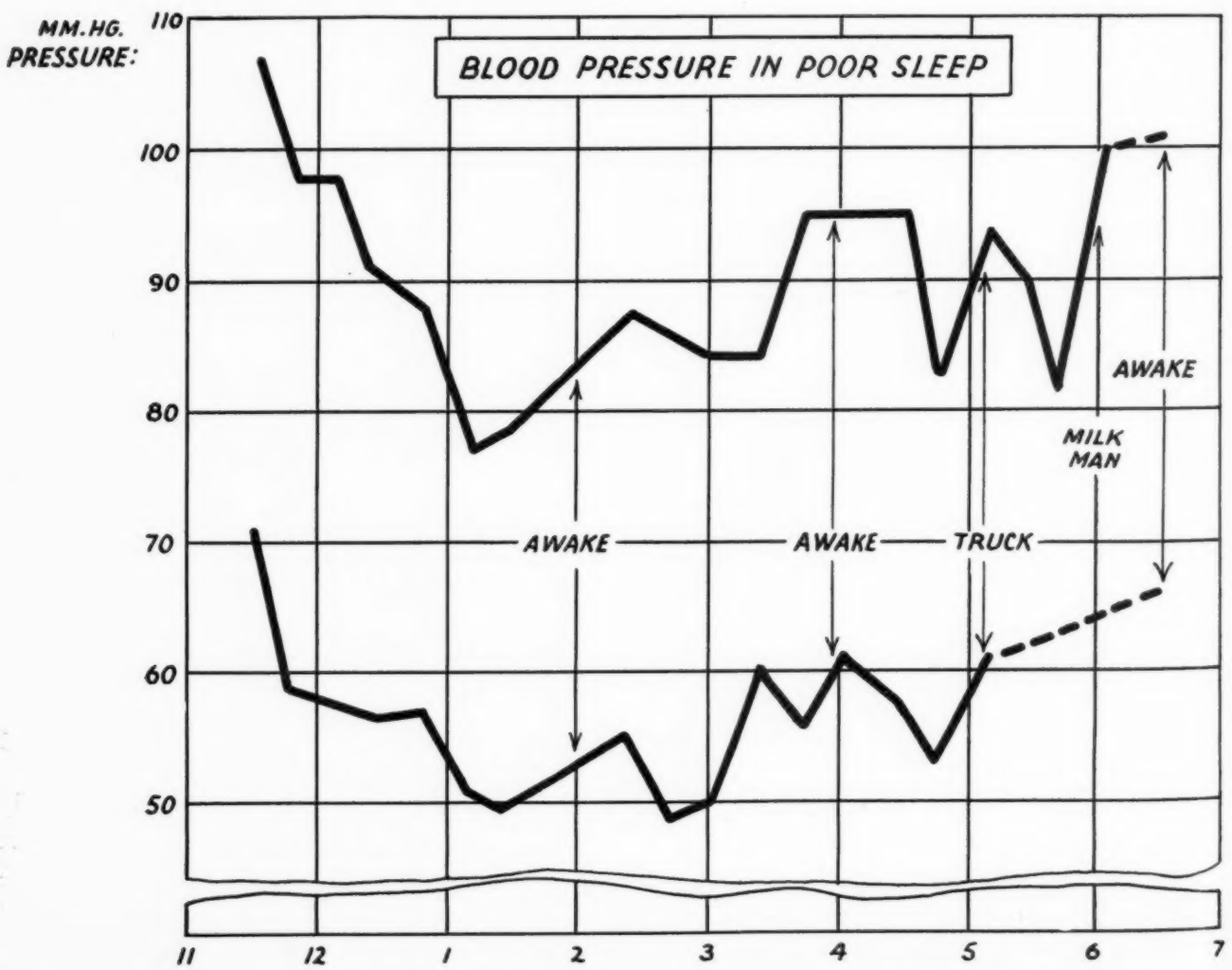
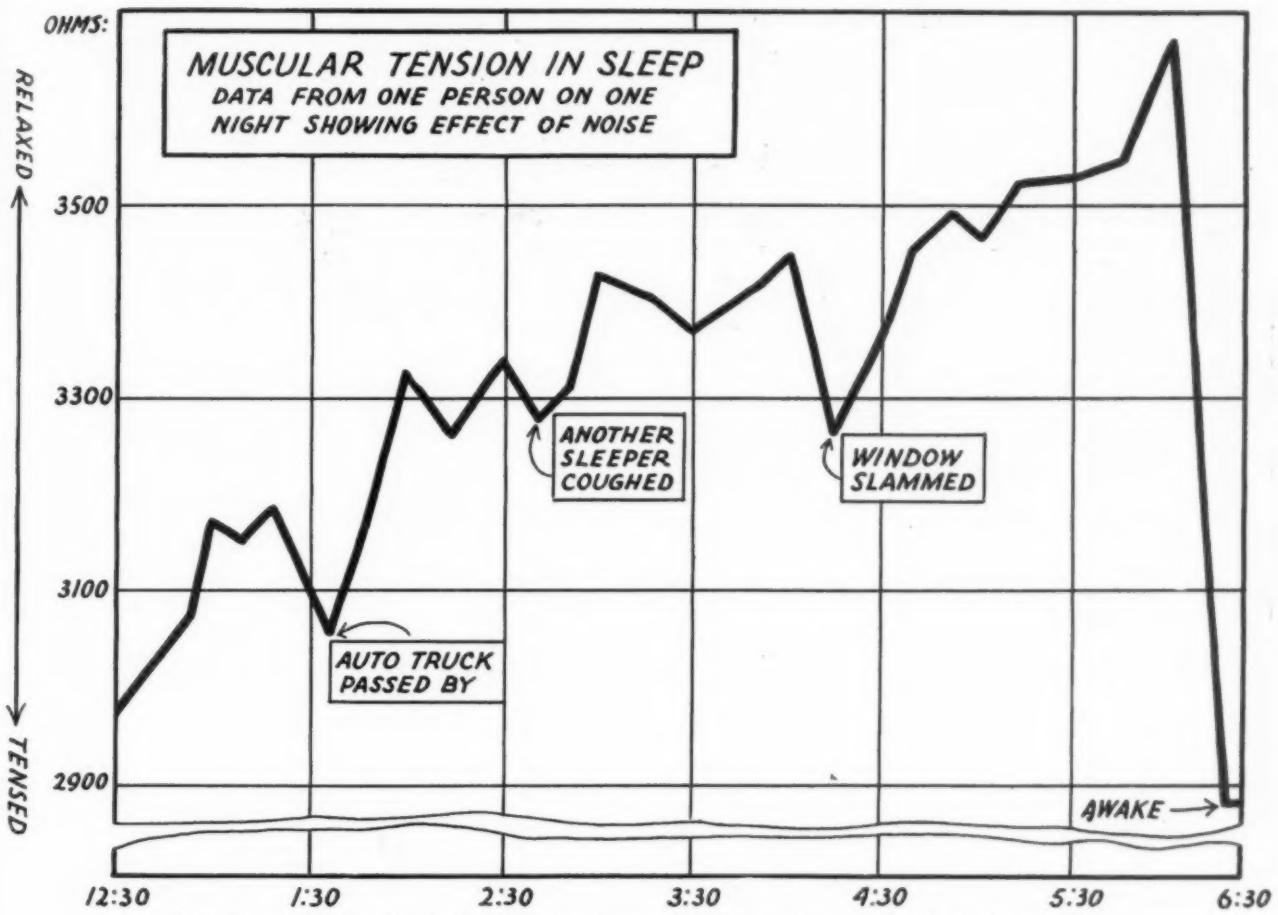


Chart showing how outside noises raise the sleeper's blood pressure at 4, 5:10 and 6 a.m.



Note the effect of noise, indicated upon increasing the tension of the sleeper's muscles.

instances continues as long as five seconds. When several sounds follow each other rapidly the result is a marked building-up of sound. It is not uncommon, for instance, for a sound to be reflected from wall to wall as many as three hundred times before it finally becomes inaudible.

When walls are constructed so as to be sound absorbent the period of reverberation can be reduced from five seconds to one second without difficulty. Hospitals can have their architects remedy noisy conditions by making the walls sound absorbent, and no new building should be undertaken without planning for such wall construction.

In the case of auditoriums and lecture rooms it is possible to use too much sound absorbing material, but in rooms, wards and corridors the more sound absorption obtained the better.

When the location of a hospital is such that outside noises present no disturbing problem, it is still desirable that a few rooms be equipped with sound absorbing walls to provide space for delirious patients and other noisy patients. Corridors should also be made sound absorbent, since otherwise they act as speaking tubes. Wards need sound absorbent wall construction, since one slightly disturbed or restless patient can otherwise upset the entire ward, and also since noise problems are increased in wards because the period of reverberation increases with the size of a room. Small wards therefore present less noise control problems than do large wards.

In planning the layout of a floor, noise control

How Different Partition Constructions Affect the Transmission of Noise From One Room to Another
(Data from Dr. Paul E. Sabine, Riverbank Laboratories, Geneva, Ill.)

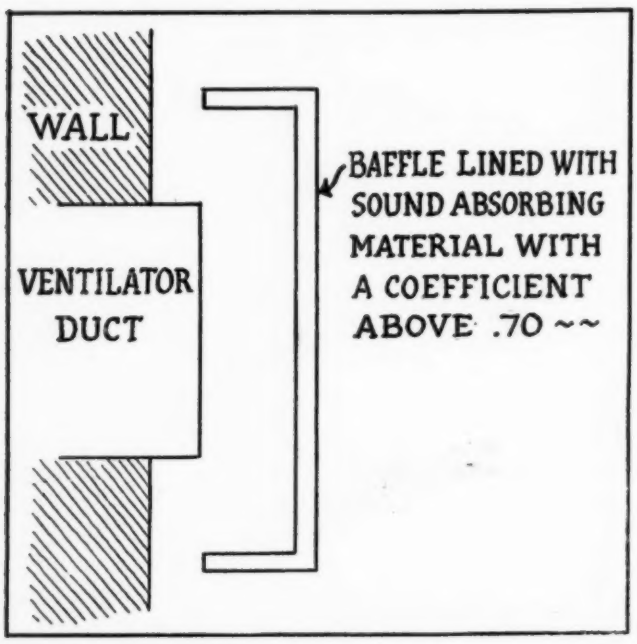
Partition construction	*Average reduction factor*[1]	*Weight per square foot in pounds*
4" hollow clay tile, plastered on both sides	3.36	27.0
2" gypsum tile, plastered on both sides	2.95	19.6
1½" solid metal lath and plaster	2.53	13.9
2x4" studs, wood lath and plaster	2.73	18.0
2x4" studs, sound absorbing wall board with coefficient of .20 used as base for plaster on each side	3.02	11.5
2x2" double studs, staggered, sound absorbing wall board with coefficient of .20 used as plaster base on each side, and extra sheet hanging loose between the studs	4.32	12.2

[1] The higher the average reduction factor the more soundproof the partition.

The annoyance from sounds arising in the corridors at Misericordia Hospital, Philadelphia, is lessened by the sound absorbing material with which the ceilings are covered.

should be taken into careful consideration. A diet kitchen or utility room, for instance, should be relatively isolated from the remainder of the floor by being surrounded by comparatively noiseless linen closets, and equipped with double doors or sound insulating doors. Similar treatment should be given the nursery and the labor room.

Doors without keyholes are desirable since a surprising amount of noise can pass through a keyhole. Rubber weather stripping on all inside doors makes them close fitting and prevents noise passing from one room to another. It also prevents the slamming of doors.



How the spread of noise through ventilators can be cut down.

High pitched noises are especially irritating, as was shown by recent research by G. Snyder and K. C. Coye, in the Colgate Psychological Laboratory. These arise in the hospital from squeaky hinges or casters. These should be oiled each month as a matter of routine.

The noise made by metal utensils coming in contact with a hard surface can be prevented if a protective ring of adhesive tape or industrial tape is placed at the point of contact. Similarly, lids for dressing jars and other jars can be lined with a ring of adhesive which will muffle the noise made when the lid is removed or replaced. Composition trays for food service can be handled more quietly than metal trays. Canvas casters and wheels are as silent as rubber and wear much longer.

Noise is rapidly becoming a public health problem of major importance. Medical associations, especially the British Medical Association, are aggressively entering the arena to attack noise. Hospitals should be far in the lead in the use of scientific methods of sound absorption to supplement and complete their rules for enforcing quiet. There is probably not a single noise problem in a hospital that architectural ingenuity and the appropriate use of sound absorbers cannot solve.

Controlling Fire and Explosion Hazards of Anesthetics

By CHARLES H. WARDELL, Jr., Ph.B.
Chief Chemist, Ohio Chemical and Mfg. Co., Cleveland

A STUDY of the fires and explosions that have occurred in operating rooms has brought forth much enlightening information. The causes of all these fires may be divided into two broad classifications: common hazards, so called because they are found generally, and special hazards, limited to the specific dangers inherent in operating room practice. The common dangers are now quite well appreciated. The special hazard of static electricity, however, is not so well understood nor is it recognized that such charges may cause explosions or fires that often develop into serious proportions.

In connection with common hazards, let it be stated that defective installations, poorly designed equipment and the improper use of electric current are among the most prolific causes of fire. Electrical equipment should be selected with the greatest care and only approved apparatus should be used.

Lights and switches should be of the vaporproof type, and particular attention should be given to heaters and electrical accessories in order that all connections may be tight. If wall outlet plugs are to be used they should be connected before starting the operation and should not be disconnected until it is certain that the room is free of flammable gases or vapors. The heater that is used for heating the anesthetic gases should be carefully examined, since many of the existing types are so constructed that they constitute a definite hazard. Heaters approved by the fire underwriters are now available. Motors should not be used unless they are entirely vaporproof or are of the approved induction type.

Electrical equipment should be periodically inspected because deficiencies, such as loose connection and worn cables, are indeed a serious menace.

DOCTOR KILLED BY ETHYLENE GAS EXPLOSION

Evansville, Ind., Jan. 3.—(AP)—Dr. Dalton Wilson, surgeon at Walker hospital, was killed and his body blown almost to bits when a drum of ethylene gas he was trying to repair exploded this afternoon in a laboratory of the hospital.

Edward Taylor, a Negro attendant, escaped with a fractured leg, body injuries, and seriously injured ear drums.

The body of the surgeon was thrown through a six inch wall, two receiving rooms virtually were destroyed, and windows throughout the building were shattered.

A spark caused by friction against metal on the drum is believed to have ignited the gas.

Before a fire or explosion can occur three essentials must be present: a combustible, a supporter of combustion and a source of ignition. Many anesthetic agents are combustibles, the most familiar being ether, ethylene, ethyl chlorid and mixtures of chloroform and ether.

There has been much discussion with reference to the relative flammability hazard of ethylene and ether. A study of the physical properties of these two materials is enlightening and leads to the conclusion that one is about as dangerous as the other. The specific gravity of ethylene compared to air is .978 while that of ether vapor is 2.59; that is, ethylene is slightly lighter than air and ether vapor is more than two and a half times as heavy. It is of interest to note that the ignition temperatures of ether vapor and ethylene are almost identical. Thorpe, Volume II, states that the minimum temperature required for a hot body to cause immediate ignition by momentary contact is 1033° C., for ether and 1000° C., for ethylene.

When ignition is effected by an electric spark rather than by a heated body, it is controversial whether or not it is purely a thermal phenomenon. It is believed that in the case of an electric spark, ionization plays an important part. The accompanying chart, taken from Thorpe's "Dictionary of Applied Chemistry," Volume II, gives a comparison of the thermal and spark energy requirements for the ignition of methane in air.

In further consideration of these combustibles the limits of flammability are important. Here again there is much contradiction, since results are markedly influenced by the method of ignition, by the shape and size of the reaction vessel, by the pressure applied and by the direction of flame propagation. Comparative methods must

necessarily be sought and the conclusions based on comparative results rather than on empirical percentages.

The "International Critical Tables," Volume II, gives the following approximate comparative values for the flammability limits of ethylene and ether vapor when mixed with air: ethylene, lower limit 3 per cent; upper limit, 35 per cent; ether vapor, lower limit, 1.7 per cent; upper limit, 47 per cent.

As supporters of combustion, there are air, oxygen and nitrous oxid, which may be present singly or in any combination. Sources of ignition are legion, the chief offenders being flames, cigarettes and electric sparks. Many hospital fires have resulted from the ignition of anesthetic gases or vapors by cigarettes. Smoking where there is exposure to these flammable substances is a dangerous practice.

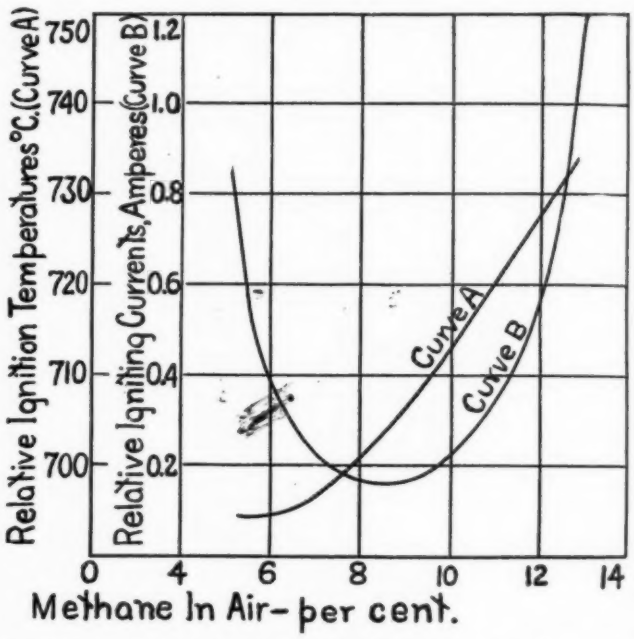
High frequency apparatus, including the x-ray, fluoroscope, diathermy and high frequency or radio knife, is worthy of careful attention. The transformer output of the diathermy or radio knife often approaches 5,000 or 6,000 volts. In the use of this equipment, portions of the circuit through the patient necessarily have very high alternating current potentials with respect to ground. For this reason sparks are likely to occur from the patient to any other conducting body such as the operator, the anesthetist or the anesthesia machine, whether they be grounded or not. These sparks are frequently so intense that the anesthetist receives an uncomfortable shock upon touching the anesthesia apparatus. Such a spark in one case ignited ether vapor adjacent to an ether jar, the resulting fire causing considerable property damage and disabling the anesthetist so that he was seriously handicapped for a period of eight months.

Methods for the complete elimination of such sparking have not as yet been devised, for it is a peculiarity that is inherent in this type of apparatus. Therefore, nitrous oxid and oxygen, in themselves noninflammable, constitute the safest anesthetic for use in the presence of such high frequency equipment.

The Dangers of Flammable Anesthetics

The older varieties of x-rays and fluoroscopes fall in the same category as the apparatus just mentioned. Exposed high frequency leads and tubes, as well as unprotected switches, are factors that should prohibit the use of flammable anesthetics when such equipment is in use. However, x-rays and fluoroscopes that are self-contained and oil-submerged are now being marketed and if these are used in connection with properly installed, oil-submerged or remote control switches there should be no danger when using flammable synergists.

Static electricity, or frictional electricity as it is sometimes called, is a form of electrical energy generated by the contact or separation of two substances, one or both of which are insulators. Such charges are readily produced by the flow of gas through pipe, tubing or in the air, one body taking positive charges and the other, negative. Most of us are familiar with these charges as evidenced by the sparks and crackling produced when we rub the back of our pet cat or when we pick up



Comparison of the thermal and spark energy requirements for the ignition of methane in air.

small bits of paper with a rubber comb that we have previously rubbed on our coat sleeve.

Often in dry winter weather after walking over the rugs or carpets of our homes, we obtain a spark when we bring our fingers close to a grounded object, such as a radiator or water faucet. The spark so obtained is often of considerable size and this fact explains the old parlor trick of lighting a gas jet by the use of the finger tip. The tremendous spark of lightning is said to be caused by the friction of wind and the action of upward air currents in breaking up large raindrops.

Many fires at filling stations have been caused by the static charges developed by the flow of gasoline through insulated hose. The charges resulting from the friction of belts in their travel over pulleys have been instrumental in causing untold damage and loss of life. It is said that more than half of the fires that have occurred in cotton gins and rubber factories resulted from electrostatic charges. The abnormal number of

fires that occur in such industries during the winter months indicate that at least half of them might be eliminated by precautions for the prevention of static. Suitable methods have been devised and we find the static hazard of our industries to be a rapidly diminishing quantity.

In operating room practice, static charges are easily produced in various ways. Persons walking across rubber or linoleum covered floors in the surgery may accumulate a charge that will be discharged when they make contact with an object possessing a lower potential or an unlike charge. Breathing bags accumulate such charges, both on the outside and the inside, due to the friction occasioned by the flow of gases and by the alternate inflation and deflation of the rubber bags themselves. Nets of various weaves which encase some breathing bags serve to aggravate this condition because of friction between the bag and the net.

Source of Electrostatic Charges

Passage of the gas through orifices and through the various tubes that form part of the apparatus is also a source of electrostatic charges. Insulated materials retain these charges on their surfaces until they are led off to ground by means of a conductor or until the intensity is sufficient to overcome the resistance of the air with the result that a spark jumps to any near-by object having a lower potential or an unlike charge. It has been demonstrated that such charges may remain in breathing bags for more than three hours. Thus equipment that has not been used for some little time may retain a charge sufficient to produce a spark that would cause ignition of flammable gases or vapors.

It is well known that water, which contains small amounts of dissolved impurities such as carbon dioxid, is a fairly good electrostatic conductor. In damp weather all objects carry a film of moisture and it is this layer of somewhat impure water that serves to connect all objects to ground, the degree of conductivity depending upon the amount of moisture present. Industry has taken advantage of this fact and it is now common practice to add moisture artificially to the air in order that electrostatic charges may be led off to ground as rapidly as they are formed. This practice has been universally adopted by paper and cotton mills, rubber factories, volatile solvent plants, dry cleaning organizations and in fact any establishment having exposure to flammable materials.

A recent article in *Heating and Ventilating Magazine,* with reference to static in dry cleaning operations, states that the charges are generated through the relative movements of different materials. The static electricity thus generated is electrically at rest and may be considered as minute electrical charges well distributed over the surfaces of the materials. As moisture is known to be an excellent conductor, it appears obvious that on dry surfaces these minute charges will remain in their distributed form. As long as the material is moist, the charges will dissipate themselves as they are formed rather than remain and accumulate until sufficient voltage is built up to cause a spark.

Increasing the amount of moisture present is called raising the relative humidity. Relative humidity refers, in terms of percentage, to the relation that exists between the amount of moisture present in the atmosphere and the amount that could exist without condensation under the same conditions of temperature and pressure.

The foregoing conditions are present in the surgery as well as in the industrial plant. Humidification is a simple matter and many different types of equipment are available. Some of them maintain constant temperatures as well as constant humidities and in addition change the air in the room every few minutes. For those who wish safety at a more modest price, there are devices, some of them automatic, that merely add water in the form of fog or spray. Windows should be closed when humidity is to be increased, and for this reason steam jets are undesirable, for naturally they raise the temperature of the room to an uncomfortable degree.

Dissipating Static Charges

The degree of humidification necessary to dissipate static charges satisfactorily has been a matter of controversy but at the present writing authorities are in agreement that 55 per cent relative humidity constitutes a safe atmosphere. The "International Critical Tables," Volume II, states: "Electrical charges are dissipated at normal temperatures (18° to 30° C.) at a relative humidity of 50 per cent or above." A national association for fire prevention advises that 55 per cent relative humidity will prevent the formation of static charges. Research conducted by our laboratory, using an anesthesia machine under operating room conditions, demonstrated that static charges ceased to be evident when the relative humidity reached 54 per cent.

Investigation of humidities in the average surgery shows them to be about 25 per cent during the winter, the exact degree depending upon location and season. This figure, of course, is dangerously low and is due, in some measure, to the high temperatures that commonly prevail. When air

is heated a lower relative humidity always results. This accounts for the fact that one feels warmer and more comfortable at a temperature of only 64° F. with a relative humidity of 50 per cent, than at 74° F. and a relative humidity as low as 20 per cent.

Not only is this condition a hazard as regards the ignition of flammable anesthetics, but there is a general consensus of opinion that it is not desirable from a health standpoint. It has been pointed out that during the course of an operation such low humidity might well promote harmful evaporation from the body cavity and many authorities agree that it might conceivably predispose to respiratory disease. Much has been written pertaining to this phase of the situation and those interested should have little difficulty in ascertaining the relative merits of high and low humidities with reference to health.

Anesthetics Must Flow Freely

We have yet to deal with the inside of the anesthesia apparatus. Modern anesthesia requires gaseous anesthetics that will flow freely and continuously. To meet this requirement manufacturers have adopted the practice of dehydrating their products. The resultant dry gas is prone to pick up charges in its passage through the machine. Also the rubber bags and tubing may accumulate an internal charge.

To relieve this undesirable condition it is recommended that large cylinders be connected to the gas machine with metallic insert hose. Reports of accidents that have come to us indicate that ignition has perhaps occurred more frequently in the breathing tube than in any other part of the equipment. For this reason it seems extremely important that the breathing tube should also be of the metallic insert variety. The bags and the gases themselves may be easily taken care of by increasing the humidity within the anesthesia apparatus. The breathing tube should be rinsed with water before starting each anesthesia. Small sponges should be placed in the breathing bags and these should be frequently moistened with water in order to assure complete and continuous saturation of the gases that pass through them.

In using metallic insert hose it is important that the metal webbing or spiral be vulcanized to the inner surface of the tubing. The importance of careful selection and installation of all apparatus cannot be overemphasized, for apparatus that, at first glance, may seem satisfactory often proves to be highly undesirable after careful study. Due consideration should be given to grounding, for in dry atmospheres and when high frequencies are in use, grounding often proves itself to be hazardous rather than an added factor of safety.

The great majority of surgery fires of which we have record, have occurred when the weather was sufficiently cold to condense or freeze the moisture from the air. The average outdoor winter temperature in eastern localities is 35° F. and the average outdoor humidity at this temperature is 60 per cent. In order to make this air comfortable, it must be heated to about 74° F., resulting in a theoretical reduction of the humidity to only 16 per cent. Under extreme conditions, heating of outside winter air may result in an indoor humidity of only 2 or 3 per cent.

Static charges seem to evidence themselves to a greater degree on the upper floors of buildings and the theory has been advanced that this peculiarity may be accounted for by the similarity of a building to a huge condenser, in which the air forms the dielectric and the building itself constitutes the plates. It is a simple matter to determine the relative humidity of the surgery and it is particularly desirable to do so during the winter months. Instruments known as hygrometers are available and it is comparatively simple to make an hourly record of the relative humidity.

In conclusion it may be said that the problem of eliminating fires and explosions in hospital operating rooms is not difficult to solve, inasmuch as many industries proceeding under analogous conditions have surmounted similar difficulties.

Suitable Equipment Is Essential

The common electrical hazards may be thoroughly eliminated by the use of carefully selected, correctly installed and properly maintained equipment.

The special hazard of static electricity may be best controlled by the use of a proper humidification system and by the use of anesthesia equipment that has been made internally conductive to static by means of moisture and metallic devices.

It is earnestly suggested that hospitals make periodical records of the relative humidities that exist in their surgeries. If they are found to be below 55 per cent immediate steps should be taken to provide artificial humidification.

In a study of this subject, the Underwriters' Laboratories mentioned the following points:

Open flames, lighted cigarettes and any source of ignition should not be permitted in the operating room.

Electric lights and switches should be of the vaporproof type.

Constant care should be taken to prevent the use of worn electric light cords or cables and to eliminate loose connections.

Only enclosed motors of approved type should be permitted in the room.

Humidity will undoubtedly reduce the fire hazard, but effectiveness will depend upon the maintenance of humidity.

Rubber bags and other objects likely to accumulate electricity should be protected as far as possible by metallic coverings or inserts.

The author gratefully acknowledges the valuable suggestions and assistance given by Dr. N. A. Lange, Case School of Applied Science, Cleveland; Dr. H. S. Booth, Morley Chemical Laboratory, Adelbert College, Western Reserve University, Cleveland; Pierre E. Haynes, consulting chemical engineer, East Aurora, N. Y.; B. L. Benbow, manager, Cleveland Wire Division, General Electric Company, Cleveland; E. R. Goldfield, engineer, Engeln Electric Company, Cleveland.

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Giving a New Viewpoint to Trustees

In a recent annual report to the board of governors of the Orange Memorial Hospital, Orange, N. J., F. Stanley Howe, director of the institution, pointed out the need for boards to revise their conception of a hospital and cease to regard it purely as a charitable organization that must exist upon limited resources. Rather it should be looked upon as an essential industry, presenting an infinite number of technical problems and striving to produce the most precious of commodities—health.

The following paragraphs from Mr. Howe's report emphasize the need for flexibility in the administration of the institution:

"Those of you who are engaged in the direction of business enterprises realize the impossibility of forecasting precisely the developments in a given year. No manufacturer would refuse orders on the ground that his operating budget did not permit him to hire extra labor or to exceed a certain scale of expenditure for materials. Such increased business would offer him an opportunity for profit which he would immediately grasp by expanding his organization to meet the need.

"Putting yourselves in the position of directors of an industry, it would be equally illogical to say that you should not exceed an average scale of expenditures at any given period because of the limitations of a budget, when faced with possibilities of increasing the income of the hospital or if confronted by the need of rendering greater service. If we could decline to take patients above a certain number and thereby keep our work uniform throughout the days of the year this would be feasible. But as we cannot limit our output we should not expect a limited force to deliver unlimited service, without flexibility to meet the varying loads. Although I believe firmly in the budget principle, I also realize its limitations and wherever the interests of the institution or the welfare of its patients require a departure from a strictly budgetary scale of expenditure, I feel it is not only our duty but our opportunity to adjust our organization accordingly, drawing on the additional earnings to finance the necessary additional expense.

"Money for buildings, equipment and memorials is relatively easy to obtain. The great problem is the meeting of annual deficits. Nothing will do more to retain public confidence and insure the continuance of loyal support from the community than a determination so to plan and build as to reduce to the minimum the burdens that will fall upon the friends of the hospital, who in succeeding years will be asked to meet the hospital's yearly needs."

How Is the Success of the Woman Superintendent Gauged?

What are the qualities that make a woman a successful hospital superintendent?

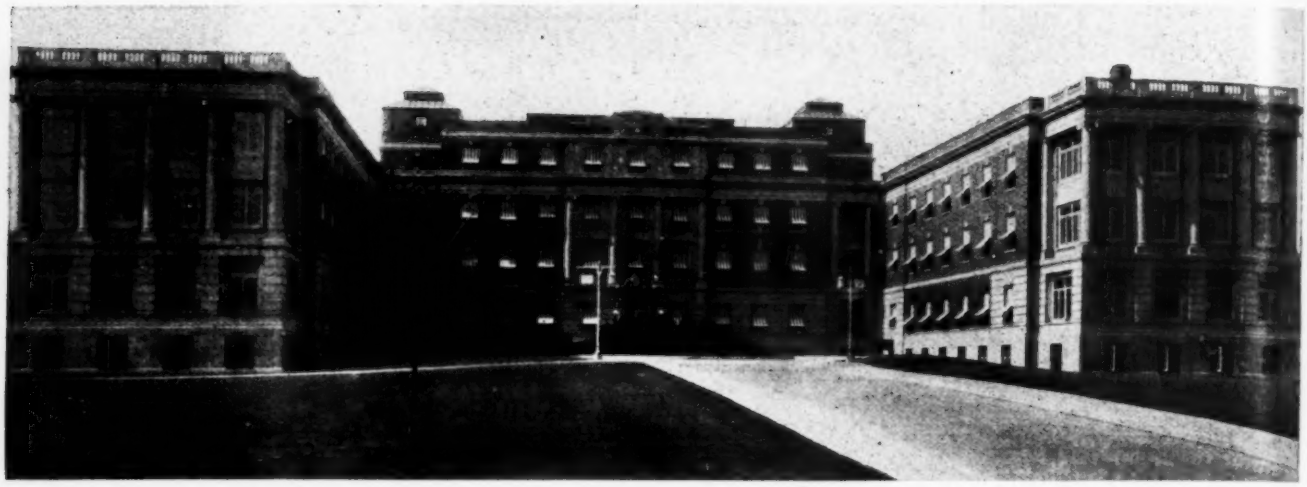
Ada R. Rosenthal, superintendent, Sinai Hospital, Baltimore, answers this question in the light of her experience first as a private nurse, then a public health nurse and now as the head of a 275-bed hospital.

"The real reason for the success of the woman superintendent who is a nurse is her natural adaptability for household affairs," writes Miss Rosenthal in the *Trained Nurse and Hospital Review*. "A hospital is a home, with the patients, nurses, corps of helpers, the clerks and other workers making up the household and thus her instinct for homemaking has an outlet here.

"With the homemaking instinct, however, must go a sense of humor and common sense. Above all the woman superintendent must give honest service. She must be acquainted with the business end of the hospital and have direct knowledge of the cost of all supplies used.

"She must be gifted with the cleanliness sense which is the test of a good superintendent. Without cleanliness the hospital will run to seed.

"The spiritual side of the woman superintendent expresses itself in the finer feelings of sympathy for those in distress, the natural results of her early training and practice as a nurse and an invaluable asset to the hospital executive."



Unusual Features Characterize New Wing at Homeopathic Hospital

By JAMES R. MAYS
Director, Homeopathic Hospital of Rhode Island, Providence, R. I.

FIVE years ago the Homeopathic Hospital of Rhode Island, Providence, R. I., which had been carrying on an institution of thirty-two beds for a number of years in a remodeled dwelling, went to the people of the city for funds for a new building. The response was generous and the building was erected, but the east and center wings only were finished, with 122 beds, the west wing being enclosed and left with rough floors. The work of the hospital expanded so rapidly that in the spring of 1927 another campaign was launched for $600,000. This amount was soon subscribed and the money was used for the completion of the west wing of the hospital building and the erection of a nurses' home to house 105 nurses.

A careful study of the records of the institution showed a predominating demand for more private and semiprivate accommodations, to be used particularly by the patients of the doctors who constitute the courtesy staff. It was therefore determined to finish the new wing in such a way that it would yield the maximum quarters for the private and semiprivate group.

The architects, Jackson, Robertson and Adams, and Howe and Church, Providence, R. I., and the consultant, Charles F. Neergaard, New York, were faced with definite limitations in space arrangement. Their solution of the problem has proved highly successful in meeting the needs of this particular hospital and seems to be a contribution to hospital planning in general. The feature of the plan is the development of the convertible room, evolved by Mr. Neergaard, which seems to solve the much discussed problem of how to provide hospital accommodations for the patient of moderate means.

The average private room measures from 9 to 12 feet in width, by 15 feet in depth. The rooms in the new wing of the Homeopathic Hospital are 11 feet 6 inches to 12 feet in width by 15 feet in depth. This is a trifle larger than would be necessary for a single room, but the dimensions are such that it is possible to use each room on all three floors of the new part of the building for either one or two beds.

The Convertible Room

To make this practical two small closet lockers were built into each room, adequate to hold the belongings of the acutely ill patient during his brief stay in the hospital. Each room has a recessed lavatory, as well as a new and highly successful feature, a curtain locker, which does away with the unsightly and flapping curtain. A very fine strong wire, developed for aeroplane use, is firmly anchored in the wall between the beds, and is run through a slot in the top of the locker door. The curtain is hung on this and when the room is used for one person the curtain is pushed into the locker. Attached to the locker end of this division curtain is a second curtain that can be drawn across the foot of the bed and fastened to a hook in the side wall of the room, thereby completely screening the patient during an examination or treatment and eliminating the necessity of cum-

At the right is shown a typical nurses' station which is conveniently located on the floor. There is a desk for the head nurse, a desk for the attending physician and a table desk at which five pupils can work on their charts.

A convertible two-bed unit is shown on the left. These rooms are all of the same size, and are so built that they can, by means of a clever curtain arrangement be converted into semiprivate rooms. The rooms are equipped with noiseless hardware.

bersome ward screens. In the six months the unit has been in operation this new feature has proved eminently satisfactory.

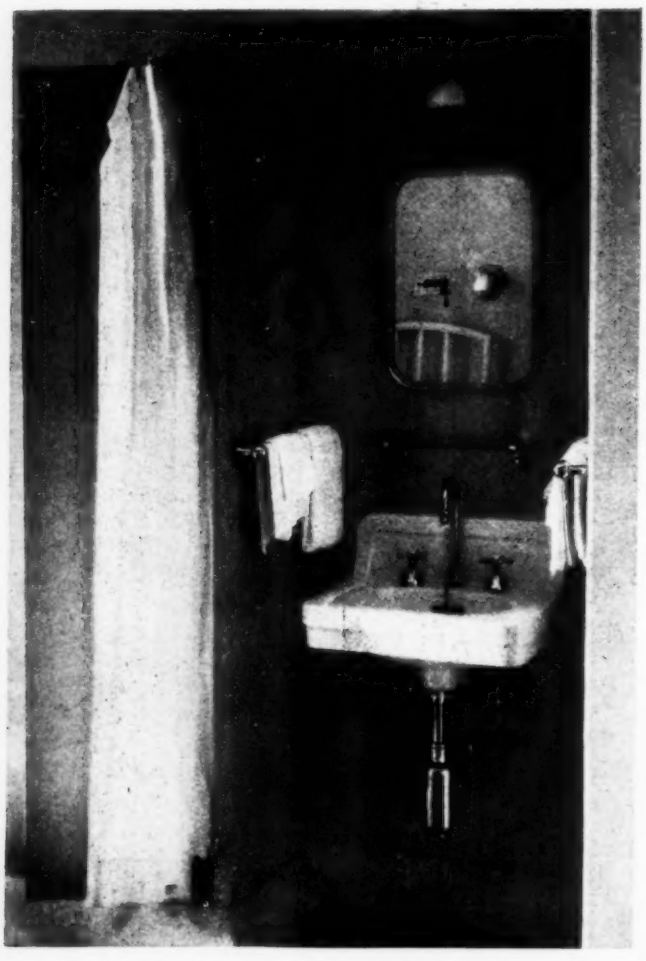
In this new unit there are three floors of patients' rooms with a maximum capacity of twenty-two beds each. The first and second floors are set up with two beds in each room. The first floor is for ward patients. On the middle floor, the unit of flexibility, the rooms are used as needed, single or double, by moving an additional bed in or out, as occasion demands. The third floor has single rooms, which also in cases of emergency, can be used as two-bed rooms.

A number of other new features have been incorporated in the building. In the patients' quarters the noiseless hospital hardware is used with great success. Friction hinges prevent the doors from slamming and hold them in whatever position is desired, to protect against any ordinary draft. These hinges require no more effort in

opening the door than is needed to push it against a door check, the only additional work being in pulling the door shut when leaving. They do away entirely with the troublesome overhead door check and floor stop. This is the first hospital equipped with the new noiseless roller latch, which eliminates the old clicking latch and deadbolt.

The lighting fixtures in the patients' rooms are of a pleasing golden brown pottery, with shades to match. The fixture at the head of the patient's bed is equipped with a receptacle to which other electrical appliances can be connected. There are no ceiling lights to shine down into the patient's eyes. In the wall at the foot of the bed, about eighteen inches from the floor, is a night light controlled by a silent switch in the corridor, by the side of the door. This feature, with the noiseless hardware on the door, enables the nurse to switch on the light in the room and enter without the slightest disturbance to the patient.

A similar type of night light is placed at various points in the corridors. This arrangement gives sufficient light and at the same time permits the opening of the transoms and doors to the patients' rooms without the glare of ceiling lights.



When not in use the curtain is neatly tucked away in its specially constructed locker.

In the rooms and corridors a protective base is used. In the corridors it is carried up six inches and out four and one-half inches, or at an angle of 45 degrees and in the rooms at an angle of 60 degrees. This prevents the walls from being marred by stretchers, trucks or furniture. In order to minimize nurses' travel and simplify bedpan procedure, the hospital is equipped on each floor with two bedpan washer and sterilizer units.

The arrangement of the nurses' station at the end of the corridor is working admirably. There is a desk for the head nurse, a desk for the attending physician and a table desk at which five pupils can work on their charts. Opening off the nurses' station on one side is the nurses' rest room, which is proving a great convenience. The nurses' station, using as it does, a corridor end, with but two feet added, affords a generous work space without taking away a bedroom.

On one side of the nurses' station is a workroom and sterilizing room where supplies are made and dressing trays are set up. On the other side is an isolation room with a window conveniently placed at the end of the pupil nurses' desk, which enables the nurse to keep watch over the patient while attending to other duties. In the isolation room there is also a night light, which is controlled by a switch at the nurses' desk.

Each floor has a spacious solarium which is equipped with regular room lights and signals and in emergency it can be used as a four-bed ward.

In the older part of the building an elaborate system of ventilating was installed, with six fans of one and one-half horse power each, to ventilate the toilets and sink rooms. By rearranging and simplifying the ventilating system, the same results have been obtained in the west wing by the use of a single fan of one and one-half horse power.

Eliminating Fire Hazards in the Hospital

Fire hazards exist all too frequently in the hospital and are responsible for the burning of one a day throughout the year in the United States and Canada, according to Dr. W. R. Hough, former fire commissioner in Baltimore, in a paper read before the New Jersey Hospital Association at its meeting in Atlantic City.

Some of the hazards enumerated by Dr. Hough are: Sub-standard electric wiring; neglected heating apparatus; failure to dispose of hot ashes properly; dust; spontaneous combustion of greasy or oily material that may be lying around; careless smokers; makeshift electric fuses; frozen pipes, and gasoline.

The fire fighting equipment at the hospital should be kept in good condition at all times.

Meeting the Cost of Accident Cases

By REV. JOHN G. MARTIN
Superintendent, Hospital of St. Barnabas, Newark, N. J.

A FEW years ago one of the heavy burdens laid upon hospitals was the care of the industrially injured. When an accident occurred in the shop or factory the injured workman was rushed to the hospital and the employer found another mechanic. No obligation was recognized beyond that of offering charity to the unfortunate victim. The hospital was expected to bear the full cost of its efforts to rehabilitate the patient while his family got along as best it could without the income of the breadwinner.

This condition was recognized as a travesty on social justice and efforts were made to remedy it. It was finally established as a basic principle that industry should bear the cost of accidents to workmen. One state after another passed laws for compensation to the industrially injured, providing for the payment of physicians', surgeons', and hospital bills, for income for the patient during his disability and for permanent awards in cases of permanent loss of function of any part of the patient's body.

While this problem is still without an ideal solution in many parts of the nation, nevertheless it is probably true that a great burden has been lifted from the hospital in most states.

Auto Accidents Increase Hospital's Burden

A new and greater burden, however, is now being carried by the hospitals in their care of the constantly increasing numbers of public liability accident cases. The automobile, one of the great blessings of the age, has brought with it a toll of injury and death far exceeding that of industry. Again the hospital is the natural and first refuge for the victims of public highway accidents. Immediate surgical aid is required and is given without hesitation. Dressings and other supplies are used, x-ray examinations are made, operations are performed, nursing care and maintenance are provided and everything is done to rehabilitate the victim of the accident.

In many cases the patient feels that he has a right to accept all this service without cost to him and when asked for payment he is indignant that he should be a double victim—first suffering physical injury and then having to pay for medical care. Naturally he feels that the person responsible for the accident should be required to pay for the damage done. And he is correct in his belief. But he fails to realize that the hospital can make its charges only to those who receive its services, unless some definite contract or agreement is made with a third party.

It is not surprising, then, that a large majority of the victims of accidents do not pay their hospital bills. It is interesting to follow up the average case, however, and generally it proceeds as follows:

Why the Hospital Bill Is Not Paid

The patient spends some time in the hospital and is grateful for all that is done for him. He expects to make a settlement with the person or company responsible for the injury and promises that when he does he will reimburse the hospital. He has already found that the case has been referred to an insurance company for adjustment. There is a difference of opinion as to the amount of damages to be paid. The patient then finds his way to a lawyer and engages him to look after his interests. The lawyer is unable to make terms with the insurance company and decides to sue. The court calendar is crowded and it is found that the case will not be tried for a year or two. So there remains the alternative of settling for an inadequate amount or waiting an unreasonably long time for the uncertain chance of getting more. Either way the patient loses. Ready money is more attractive than a long wait for an uncertainty and he generally accepts the advice of his lawyer to accept the lesser amount in a friendly settlement.

Now the first bill that is paid after settlement is that of the lawyer. This leaves the patient so little that he cannot possibly liquidate his other indebtedness, caused by his unemployment and injury. So the last item on the list is the hospital bill and as the money has been spent the hospital bill must go unpaid.

Thus the hospital's deficit, which exists because of free service to the indigent poor, is swelled to larger proportions by unpaid accident liability cases. It is correctly maintained that endowment funds should not be used to pay for such service. Nor is it fair to charge the community,

either through a community chest drive or by taxation, with the cost of this work. The cost should be borne by those responsible for the damage done.

Now it so happens that most of this free service is the result of automobile accidents. The cost of automobile accidents, then, might reasonably be charged against automobile owners generally. All the accidents could be paid for from a central fund to which all automobile owners would contribute. That, in effect, is mutual insurance. But it is manifestly unfair for some automobilists to refuse to contribute to such a fund or to go without insurance if they are not able to pay in full the cost of the damage they may cause, for then the community must pay the bill and the community is not responsible for the accident.

Compulsory Insurance the Answer

The community has a remedy for this situation. The voters of the state have the power to bring about legislation to compel every automobile owner whose automobile is operated upon the public highways of the state to carry adequate insurance or provide a bond to guarantee payment for any damage his automobile may cause. A compulsory liability insurance law has been passed in Massachusetts, and other states are watching the experiment with great interest.

The hospital's interest is not only in the placing of responsibility but in actually receiving the money it has expended for the care of liability cases. This can be provided for by law. The industrial compensation case laws have worked so well that similar machinery might well be set up for public liability accident cases. The state should set up a commission to handle all such cases and take them out of the courts, which are already too crowded. Only appeals from the decisions of the commission's referees should be carried into the courts.

The agents or referees of this commission should not only hear the cases, but should direct the disposition of the money awarded in the case. Thus the money would not be paid in a lump sum to the plaintiff or his lawyer, as is done in court settlements, but would be divided equitably among all who have a claim upon it. Among these claimants might be numbered the injured person, the physician who attends him, the hospital which cared for him, the family who were denied support by reason of the accident and the lawyer who represented the plaintiff.

Such a commission would more than justify itself, especially if administered with as great efficiency and fairness as is shown by the New Jersey Department of Labor in conducting the industrial compensation case bureau. There would be a guarantee to the insurance companies that they would not be exploited. The injured persons would be adequately compensated. Those who gave their services for the restoration of the injured to health and strength would be considered and no one would be overpaid.

Moreover, the expert and businesslike settlement of these cases would have a tendency to dispel the vague hope that some people seem to entertain that if they can only appear to advantage before a sympathetic jury and have an attorney eloquent enough to convince the same twelve men of the justice of their case it will be settled to their entire satisfaction. If the commission had the first hearing of all these cases, with trained referees who would not be swayed by rhetoric or influenced by sentiment, it is safe to say that comparatively few cases would be carried into court.

It is apparent that the public is being aroused to the advisability of assuring justice to persons injured in public highway accidents. This is indicated by the trend of thought toward compulsory liability insurance for automobilists. Hospital people should take cognizance of this condition and should be ready to contribute suggestions expressing their point of view, for the guidance of legislatures about to pass state laws on the subject. Our state lawmakers will surely be ready to protect the institutions that are caring for maimed and shattered victims of highway accidents and restoring them to health and usefulness. Let us see that they incorporate in the law adequate provision for guaranteeing payment for hospital service.

The plan suggested above has had the indorsement of judges who desire to see such cases removed from crowded court calendars. They see that speedy justice would thus be available and that all interested parties would be fairly treated. The hospital is among those interested and should, with the others, receive consideration in bringing about a solution to this many sided problem.

Solarium Promotes Threefold Program

The ideals of the Queen Alexandra Solarium, near Victoria, British Columbia, are the prevention of illness in delicate children, the restoration to health and physical fitness of children crippled by illness, accident or from birth, and the education of the crippled child undergoing treatment.

The first patient was admitted to the solarium March 1, 1927. Since that time eighty-five children have been admitted and forty-four discharged, says an article in the *Hospital Medical and Nursing World.*

An Analysis of Hospital Earnings

By JAMES S. PARKER
American Hospital Association, Chicago

HOSPITAL income may be divided into three parts—earnings, income from endowments and all other income. We are concerned here primarily with earnings. The data presented have been gathered by the questionnaire method.

A total of sixty-three hospitals answered the question regarding distribution of income. Out of these sixty-three hospitals, only ten earned less than 65 per cent, the figure reported as average in the analysis of Chicago's social agencies. The lowest percentage was 6, while the highest was 99. The arithmetic mean was 77.73 per cent, a figure considerably higher than the average usually stated and probably higher than the general average. The medium also is apparently high, being 86.

It is entirely possible that bias occurred in the sending of replies, and that only those hospitals with good records of earnings in their distribution of income answered the questionnaire. The mode of 88 appeared 7 times, but the following

TABLE I—PERCENTAGE OF EARNINGS TO TOTAL INCOME FOR EACH OF 63 HOSPITALS

Percentages	*Frequencies*	*Percentages*	*Frequencies*
6	1	79	1
9	1	80	2
21	1	81	1
27	1	83	1
33	2	84	1
34	2	85	2
37	1	86	2
39	1	87	1
40	1	88	7
65	1	89	1
71	3	90	2
72	1	93	2
73	1	95	6
74	2	97	5
75	1	98	5
76	2	99	4
77	1		

percentages with their frequencies should be noted: 95 per cent, 6 times; 98 per cent, 5 times, and 99 per cent, 4 times. Table I gives the complete summary. The explanation of all other income is shown in Table II.

It should be noted that the extremely high percentages in the series for all other income came either from hospitals supported largely by tax subsidies or from children's hospitals. The arithmetic mean of all other income for the sixty-three institutions is 13 per cent, which shows that this source, even including community chests, is unimportant compared with earnings. The mode is 0, which appears 11 times. In other words, 11 out of 63 hospitals are supported entirely from

TABLE II—PERCENTAGE OF ALL OTHER INCOME TO TOTAL INCOME FOR EACH OF 63 HOSPITALS

Percentages	*Frequencies*	*Percentages*	*Frequencies*
0	11	18	1
1	3	19	1
2	6	20	1
3	5	22	1
4	3	23	1
5	2	24	1
6	4	26	1
8	2	29	1
9	1	30	1
10	3	46	1
11	3	60	1
12	3	67	1
14	4	73	1
15	1	79	1
16	1		

earnings and endowments together, and some of these entirely from earnings. If we eliminate the hospitals with no other income, the mode is 2 per cent, which occurred 6 times. The median is 8 per cent. Of course undue importance should not be attached to these figures, in view of the fact that such unlike institutions as children's hospitals and general hospitals of varying bed capacity and percentage of occupancy have been thrown together into one group which lacks essential homogeneity.

Out of the 63 replies showing income from earnings, only ten earned less than 65 per cent, the figure reported as normal for Chicago. Out of a total income of $4,636,920, income for service produced $3,043,382, or 65 per cent.

Further data on this point are also available. W. J. Norton, Detroit, writes:

"Combined private hospital budgets of Detroit

show an earning power of 84 per cent after endowment yields and payments from government for indigent persons have been deducted, and the united budgets of private hospitals in Cleveland show an earning power of 69 per cent. It is not just to compare a single hospital in one city with a single hospital in another city, without presenting the complete hospital service of each community and applying comparative classifications and standards. Nevertheless it is important to note that institutions of about the same size, standards and traditions vary greatly in different cities in their client earning power."

TABLE III—PERCENTAGE OF FREE WORK TO TOTAL SERVICE FOR 54 HOSPITALS

Percentages	*Frequencies*	*Percentages*	*Frequencies*
0	1	20	1
1	5	21	1
3	2	22	1
4	1	23	1
5	1	25	2
6	1	28	2
7	1	33	1
8	1	34	1
10	9	35	1
12	3	36	1
13	1	38	1
14	1	43	1
15	2	46	1
16	1	48	1
17	2	60	1
18	2	80	1
19	2		

But the mere total of earnings from patients does not tell the true story of a hospital's work. Earnings are not incompatible with service. Let us remember that hospitals serve all their clients. But taking a narrower view of service, let us see how much charity work is done by the hospitals.

Under the uniform systems of accounting in use among most hospitals of the country, patient days of service are divided into three classes—free, part-pay and full-pay. In the first class, the patients pay nothing; in the second, they pay part but not all of the cost of service, in amounts varying usually with their ability to pay; in the third class, the patients pay rates varying with the comfort of their accommodations, rates that usually permit a profit, which helps to take care of the deficit caused on the other two classes of service.

With this brief explanation, let us now see how much charity service is given, as proof of our contention that hospitals are primarily welfare agencies.

In replying to the questionnaire, 54 hospitals gave data covering the division of their hospital days of service into these three classes.

Considering first the free work, we find that the arithmetic mean of the free work of these 54 hospitals was 18 per cent. The median was 14 per cent. The mode of 10 per cent appeared 9 times. The next greatest frequency was 5, or 1 per cent. The greatest amount of free work was 80 per cent, and the least was 1 per cent. The complete data for all three classes, free work, part-pay work and full-pay work, may be found in Tables III, IV and V.

TABLE IV—PERCENTAGE OF PART-PAY WORK TO TOTAL SERVICE, FOR 54 HOSPITALS

Percentages	*Frequencies*	*Percentages*	*Frequencies*
0	1	25	1
1	1	27	1
2	1	32	1
3	2	33	1
4	5	40	1
5	2	41	1
6	1	42	2
8	1	43	2
10	2	44	1
11	2	50	3
12	1	55	1
14	1	60	2
15	2	65	1
16	1	67	1
18	1	70	1
20	1	72	1
21	2	76	1
22	1	79	1
24	1	82	1

In the division of part-pay work, the arithmetic mean was 28 per cent. The median here was 21 per cent and the mode was 4 per cent, which appeared 5 times. The lowest percentage of part-pay work was 1, and the highest was 82. The range between these points was similar to that of the free work, with the single exception that a greater number of percentages higher than 50 per cent appeared in the part-pay series than in the free series.

The series for full-pay work, taken together with that for part-pay work shows a fairly close correlation with the data already presented regarding income from earnings. The arithmetic mean here was 52 per cent, and the median was 56 per cent. The mode, 70 per cent, appeared only

three times, and there were 7 other items with a frequency of 2.

In analyzing these figures, two points should be borne in mind. First, there is considerable variety in the exact methods used for figuring these three classes. For instance, each hospital determines for itself what part-pay work shall mean. Obviously this depends to a great extent on costs per patient per day.

In the second place, the amount of free work done varies directly with several of the sources of income. For example, a general hospital with ample endowments should and usually does perform much more free work than one with no endowments or one inadequately endowed. Likewise, a hospital that performs special services, such as an orthopedic hospital for children, can make an appeal either to the community chest director, the trustees, or the public, who secure for it funds that make possible an amount of free work much greater than the average.

TABLE V—PERCENTAGE OF FULL-PAY WORK TO TOTAL SERVICE, FOR 54 HOSPITALS

Percentages	*Frequencies*	*Percentages*	*Frequencies*
3	1	56	1
4	1	58	1
5	1	59	1
11	1	60	1
12	2	61	2
15	1	65	2
19	1	66	1
20	1	69	1
21	1	70	3
22	1	71	1
23	1	72	2
24	1	74	1
25	1	75	1
29	1	79	1
30	2	81	1
35	2	86	1
39	1	89	1
40	2	93	2
45	1	94	2
46	2	96	1
47	1	98	1
51	1		

These two points have important bearings when comparisons are made. Again I repeat that the case method rather than the generalization method is the more scientific.

The reader should also notice that full-pay work does not include total earnings, but that in all cases, part-pay income should be added to full-pay income to get total earnings.

These data give a birds-eye view of the earnings of individual hospitals as complete plants, but a more detailed analysis by hospital departments is necessary in order to know just which departments are responsible for these earnings. In the questionnaire, information was secured by asking hospital superintendents whether they broke even, lost money or made money on certain specified departments. For obvious reasons, exact amounts in dollars were not requested.

The departments named in the questionnaire were as follows: x-ray, laboratory, maternity, surgery, anesthetics and occupational therapy. The replies indicated that the departmental grouping had omitted several important departments. Insofar as some of the executives did not write in the departments omitted, the questionnaire and data are defective from the viewpoint of a complete study.

The difficulty with attempting a more extensive classification is that some hospitals do not have as extensive departmentalization as others. Several replies indicated that the hospitals did not classify their accounts by departments in such a way as to enable the executives to answer this question. Others use much more detailed divisions. It is believed that if the questionnaire had included also departments of physical therapy, dispensary, nursing and diets, the classification would have been complete for most hospitals.

Even as the question was framed, several hospitals that answered for most of the departments were unable to answer for one or two. In particular, the anesthetics department is often merged with the surgery, and the maternity is

TABLE VI—EARNINGS OF HOSPITAL DEPARTMENTS, CLASSIFIED AS BREAK EVEN, LOSE MONEY, MAKE MONEY

	Total	*Break Even*	*Lose Money*	*Make Money*
X-ray	66	13	10	43
Maternity	55	9	25	19
Laboratory	65	10	12	43
Surgery	65	10	16	35
Anesthetics	55	13	14	28
Occupational Therapy	19	2	15	2
Social Service	1		1	
Physical Therapy	9		1	8
Electrotherapy	1	1		
Medical Cases	1			1
Dispensary (Out-Patient Department)	2		2	
Accident Room	1	1		
Pharmacy (Drugs)	3		1	2
Dressings (Dispensary)	1		1	
Optical	1		1	
Private Room Service	3		3	
Orthopedic Shop	1	1		
Ward Beds	1			1
Children's Medical and Surgical Wards	1	1		
Barber Shop	1	1		
Nursing	1		1	

not separated from the surgical or medical departments. Also, many hospitals do not have departments of occupational therapy, because this is a relatively new service. For these reasons, the total figures for the departments named in Table VI are smaller for some departments than for others. This is especially true of some of the departments just named.

Several of the departments that appear only once are not very common. For instance, the orthopedic shop and the barber shop were both inserted by the same hospital. The department labeled "Dressings" probably means the out-patient or dispensary department or the emergency or accident room.

Only One Department Loses Money

Analysis of Table VI discloses the fact that all but one of the major departments of a hospital make money oftener than they lose money. The only department in which more hospitals lose money is the maternity department. One explanation for this condition is the overhead of providing a separate department. The peak load of a maternity department can never be forecast exactly. If a hospital makes adequate preparation for such peak times, it is bound to lose on intervening periods when beds in the maternity department lie idle. This is especially true when the maternity is separated from the surgical and medical floors. When there is no such separation, the loss from idle beds is usually less. However, the preponderance of medical opinion is in favor of the separate maternity, some authorities even going so far as to claim that it should be in a separate or an isolated building.

Occupational therapy is a loss to most hospitals. The surprising thing about this department is that two hospitals break even on it and two make money on it. It would be interesting to know exactly how the hospitals that make money on occupational therapy are able to do it. Perhaps the salary of the director is paid out of endowment income, for most authorities agree that even the sale of products of the department, or the purchase of material by patients when they keep the articles they have made, will not balance the budget of this department.

The figures in Table VI will be of value chiefly to hospital superintendents who wish to see how their particular institutions compare with others.

Especial attention should be paid to the newer departments of physical therapy and electrotherapy. Granted that those are the departments requiring most expensive machinery, nevertheless the return on the capital investment is usually great.

Whether a hospital should make a profit on all of its departments is a question that we cannot decide in this study. It is apparent that at present hospitals do not.

Nor can we discuss the question whether a flat charge for all ordinary services, without itemized accounts, is superior to the prevailing method of charging for the exact services rendered to patients. We may briefly state the arguments in favor of the flat charge as follows: The man in the street does not understand all the special charges; he thinks that some of them are extras; he therefore thinks he is overcharged; he therefore refuses to pay his bill.

A variation of the flat charge has been adopted by some hospitals in an effort to reduce the deficit on the maternity department. These hospitals fix a charge for a normal stay, say one week, or less. A minimum is fixed, and three or four classes are made, the classes being based on length of stay. The patient pays a flat charge for all regular services. The experiment puts a premium on decreasing the length of stay of patients, which may or may not be to the patient's advantage, depending on the special conditions present in each individual case. This experiment seems to be a success in the hospitals that tried it, however.

These and other plans for increasing earnings have been proposed. One of the more radical ones is that of turning hospitals into preventoriums, making them the center of preventive medicine and annual medical examinations. This proposal is in line with advanced thinking on the modern practice of medicine.

Three Major Functions of the Protestant Hospital

Church hospitals have three major functions, according to Robert Jolly, superintendent, Baptist Hospital, Houston, Texas, writing in the *Western Hospital and Nurses' Review*. These functions are:

Caring for the sick poor not only of their own denomination but of others as well. Until the day when every county boasts a tax-supported hospital, church and private hospitals must bear the burden of caring for those who are unable to pay for hospitalization.

Looking after the spiritual welfare of their patients. When a person must spend some time in the hospital, he has more opportunities to think over the things he has been neglecting, and the dependence that illness brings makes the spiritual adviser ever welcome.

Giving Christian education to the students in their schools of nursing. Schools of nursing, instead of being regarded as a necessary evil in the running of the hospital, should be looked upon as an opportunity to fill creditably one of the necessary professions of to-day. None but church supported schools of nursing can give such definite Christian training as needs to be given.

How Success Was Achieved in Drive for Negro Hospital

By FRANCIS FISHER KANE
Philadelphia

WE HAVE had an inter-racial drive for a colored hospital in Philadelphia, and what is more, the drive was a success. We got what we wanted and 50 per cent more. Our object was to obtain the money with which to build a nurses' home and pay off the debts of the hospital. We asked for $200,000 and we got $320,000. How did it happen?

Mercy Hospital, with its training school for nurses, was founded by Negroes in Philadelphia twenty-one years ago. It was at first quartered in a dwelling house on a side street, where its usefulness to the community was speedily established. In 1919 the opportunity was presented of acquiring the five-acre lot and building occupied by the Protestant Episcopal Divinity School at Fiftieth Street and Woodland Avenue, in West Philadelphia, and the directors, with courage and foresight, decided to buy the property, although doing so entailed a heavy financial risk and considerable personal sacrifice.

The total cost of the property was $135,000. Part of this sum was paid in cash, the rest of the purchase money being secured by mortgages on the property. Four of the directors of the hospital, colored men and women of but moderate means, pledged their houses in order to secure the necessary money. This was characteristic of the fine spirit that has animated the institution from the first. Its management has been conservative. The hospital has done little to advertise itself, but its standards have been high, and those who know about hospitals in Philadelphia have not failed to give it their support. It has had from the first the endorsement of the Chamber of Commerce and the Welfare Federation of Philadelphia.

Mercy Hospital is a hospital for colored persons. Its interns and nurses, its superintendent and other employees are all colored. It has, however, always had the service of a notable group of white consultants on its staff, and on its board of directors there have always been a few well known white citizens, men and women. Its superintendent, Dr. Henry M. Minton, is a colored physician of high standing and fine character. He is a graduate of Exeter School and he received his M.D. degree at the University of Pennsylvania.

The hospital has never been able to have a separate building for its nurses, and since its removal to West Philadelphia it has had to quarter the nurses in rooms on the third story of the main hospital building. The rooms are directly under-

A view of the children's ward at the Mercy Hospital, Philadelphia.

neath the roof. They are hot in summer, cold in winter, ill ventilated and badly lit by dormer windows at all times. It has been necessary to crowd three or four nurses into a room.

Illness and even deaths have occurred among the student nurses, due, in part at least, to the overcrowding and the lack of proper means for rest and relaxation, for they have had no place except these rooms in which to rest, study, chat or sleep, and no suitable lecture hall. The state board of examiners for the registration of nurses was aware of these bad conditions, and had several times warned the hospital authorities that they must be altered. The New York State board had gone so far as to refuse to certify graduates from the institution, definitely taking the ground that a nurses' training school is not up to standard unless the student nurses are housed in a proper building, separate and apart from the wards in which they work.

From time to time efforts had been made by the directors of the hospital to obtain the needed money, and in 1924 George Wharton Pepper, former senator, whose wife is a director, generously started a movement for the collection of funds. Unfortunately, the movement had to be abandoned when Mr. Pepper went to Washington. At the time only some $14,000 was raised.

In 1927, the matter was taken up again, and a firm of campaign specialists was retained to organize a drive. A campaign was started last spring, the active drive taking place during the month of June. Friends of the hospital were interviewed and statements obtained. Among others, Dr. H. M. R. Landis, a director in the Phipps Institute and Philadelphia Health Council, testified as to the urgent need of colored nurses in public health work. As he put it, "They do among their own people what no white women can accomplish—they get the confidence of their patients and keep coming to the dispensaries. Only through their follow-up work in the homes can we be sure that our directions are obeyed. The young colored nurse is out to make good. Where a white nurse is content to work a set number of hours, a colored nurse will work overtime, for the very reason that she is on her mettle to make good. There is a fine crusading spirit among the colored nurses, the value of which is great."

Katharine Tucker, director, Visiting Nurse Society, and Dr. Charles H. Frazier, president, Public Charities Association, had similar testimony to offer. S. Lillian Clayton, president. State Board for the Registration of Nurses, wrote that she knew of no finer body of young women than the graduates of the Mercy Hospital Training School.

It will be seen that we had a solid foundation on which to build our appeal. Mercy Hospital was an established institution with a fine record, and we were appealing for money to meet a definite and admitted need. We were asking for money that we might spend it in increasing the efficiency of the plant, and in providing suitable quarters for the student nurses already on our roll. The welfare federation and the chamber of commerce approved the drive and bade us God-

speed in our efforts to collect the necessary money.

On the other hand, what did the public at large know of the Mercy Hospital? Very little, if anything, save that it was a hospital under the management of Negroes. Before we could expect the average person to contribute, we should have to tell him about the hospital and the work it was doing. We should have to explain to him the public character of the work, and overcome any prejudices that he might have against a hospital run by colored people. And with the large number of other appeals that were being made, how could we hope to interest the public in this one? How could we compete successfully with the numerous hospitals for the white population, many of which were at the very time making appeals to a public already well informed as to their needs?

The case at first seemed desperate, and it was hard to convince the ordinary white person of the claims the institution had upon his purse. But there was one argument that finally appealed to everyone. This was the health situation among the Negroes, their high death rate and the need of doing something to cut it down. True, other hospitals were admitting Negro patients, there was no lack in Philadelphia of hospital treatment for the Negroes. But were Negroes to be cared for only in hospitals for white people? Only by white physicians? Ought they not to have hospitals, doctors and nurses of their own?

It was indeed necessary that the Negro should have hospitals of his own, if medical education and training were to be open to him, for the white hospitals of Philadelphia offered no opportunity for young colored women to be trained as nurses or for young colored graduates of a medical school to secure experience as interns. They are not admitted to the white hospitals, and the tragedy of it is that our state requires an internship of twelve months before the graduate of a medical school can practice medicine. These nurses and doctors are therefore compelled to go to the Mercy Hospital or the Douglass Hospital, if they would get their training in Philadelphia. And we now have 175,000 colored persons in our midst.

The situation in Philadelphia is, in fact, no worse than in the United States at large. In an article in THE MODERN HOSPITAL, April, 1928, Edwin R. Embree, president, Rosenwald Fund, Chicago, says that in the whole United States there are not more than twenty-five institutions under colored management that afford opportunity for the training of nurses and physicians and at the same time are of a sufficiently high standard to be approved by the American Medical Association and the American College of Surgeons. And has not the lack of opportunity for medical education and training among the Negroes some bearing on their high death rate? Of course it has. We put these facts before the charitable givers of Philadelphia and the argument prevailed. It won the day and our drive was a success.

We first formed a sponsoring committee of about fifty well known individuals—white and colored. We tried at the same time to form a special gifts committee to secure a certain number of big contributions from the rich, but this committee had at first little success, perhaps because our campaign literature had not yet been published and when we visited "prospects" the entire story had to be told them from the beginning.

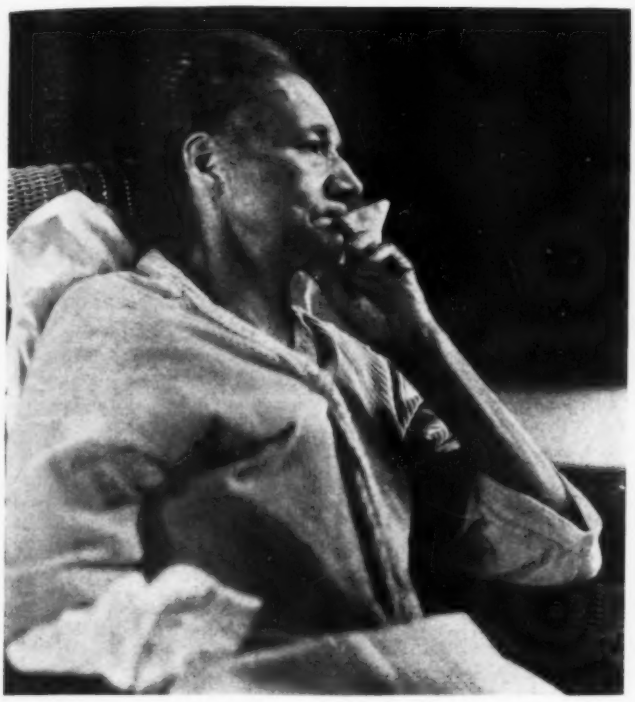
Our hardest task was to get the right sort of chairman—an earnest, wide-awake business man who would lead in the campaign. Such a leader we did finally secure. J. Willison Smith, the president of one of our largest trust companies, generously consented to act, and with him at the helm, it was comparatively easy sailing. We had

A corner of the laboratory. Here as elsewhere in the hospital the workers are colored.

also the services of Albert M. Greenfield, Philadelphia's best known real estate broker, who acted as treasurer of our campaign fund.

Teams of both races were organized. Headquarters were established for the white workers on Broad Street, in the central part of the city, and for the colored workers on a corner property down town. Some of us had hoped that we might be able to put the drive through without separate teams and separate headquarters, but conditions

The Mercy Hospital ambulance, which is always in readiness to serve humanity.



in Philadelphia did not permit this. It was impracticable to have all the workers reporting at the same place and at the same hour of the day. The white workers were mostly young men drawn from business offices in the center of the city, and they had to meet at lunch time. The colored workers, on the other hand, were very largely domestic servants or persons engaged in small shops. It was not possible for them to meet during their working hours, and suppers had to be arranged for them in the evening. As a matter of fact, they generally did not gather until after nine o'clock. Sometimes their meetings were not over until after midnight.

The spirit of the workers was admirable. The colored group put a much larger number of workers in the field than did the whites, and they raised over 50 per cent of the money. At the close of the campaign, there were considerably over 1,100 colored workers organized under captains and divisions leaders, and there were only some 220 white persons organized. The results were surprising to many of us who had doubted the possibility of the Negroes taking so large and so active a part in the movement. At the close of the drive, the amount contributed in pledges and cash was $319,568.09, and of this amount as much as $161,075.19, or more than half, was raised by the colored workers. The colored teams had secured 6,214 subscribers, the average subscription being $25.94. The white teams had secured $158,492.90 from 873 subscribers, with an average subscription of $181.54.

Moreover included, in the white subscriptions were two large contributions amounting together to over $60,000. One of those was a contribution from the Julius Rosenwald Fund, amounting to $35,000, $25,000 of this being promised for the nurses' home on condition that an extra $25,000 should be raised, the re-

maining $10,000 being promised for "increased maintenance expenses" to be spread over a period of three years, and to be given if another $10,000 were similarly donated to the hospital. The other large gift obtained by the white workers was a sum of something over $27,000, given by "a friend of the Mercy Hospital" to match the Rosenwald donation. The largest contributions reported by the colored workers were one of $2,500, from John T. Gibson, the owner of a movie theater and a reputed millionaire, and a gift of $2,000 from George W. Deane, one of the directors of the hospital.

This drive was a notable one in view of the cordial relations established and maintained between the races throughout its course. The courtesy, tact and gratitude of the colored workers were constantly and pleasingly evinced, while the kindly sympathy and interest of the business men, who formed by far the largest number of the white workers, were no less admirable. Mutual good will and respect and a common aim developed a fine spirit of generous cooperation among white and colored and we look forward to a continuance of such work in the years to come.

The Responsible Nurse Is the Interested Nurse

Of the two classes of nurses, namely, those who give cheerful service willingly with first regard to the welfare of the patient, and those who work mechanically with regard principally to nursing technique and avoidance of criticism, the latter predominate. The methods of dealing with this type of nurse in order to instill in her more of the spirit of her profession was the subject of an article in a recent issue of the *Trained Nurse and Hospital Review.*

The following are some of the suggestions made with a view to attaining the desired results:

Certain periods may be devoted to the discussion of different ethical problems, such as the student's responsibility to the school, the hospital and its representatives; the responsibility of the nurse in the case of danger, injury, or death; the foreground and background of the patient; the patient's three selves—physical, mental, and spiritual, and the ethical responsibility of the nurse, which is greater than the legal responsibility.

Discussions of various problems that clearly show the responsibility of the nurse, will undoubtedly inspire the nurses and do a great deal towards arousing a deeper interest in their work.

Group nursing in the wards assists greatly in developing responsibility in student nurses. By this method there are certain duties for which each nurse is held responsible, and because she is better enabled to become acquainted with those patients under her charge it becomes possible to render them better service. There are, however, certain conditions under which group nursing could not be carried on.

Treatment charts of various sorts are used extensively in many hospitals. These are for the reference of students in case any doubt arises as to what treatments the various patients are to receive. Each student must do her own charting on the clinical temperature chart. In the group nursing plan the students often take more interest in their charges and find the case reports an interesting part of their work.

Information on Nursing Available in Libraries

Through the cooperation of the library profession, the National League of Nursing Education, New York City, is able to provide for a wider dissemination of information on nursing, according to *School and Society.* The league will supply on request a list of recommended books on nursing, and material on the subject of nursing as a profession to be added to the other material on vocational guidance in libraries.

The list of information available includes: ratio of nurses to patients; how to establish the eight-hour day; how to establish a hospital nursing school; how to organize a university nursing school; how to organize a central school; what resources are needed in a community for organizing a nursing school; method of establishing affiliations; courses for graduate nurses both in hospitals and universities; staff education; supervision; ward teaching; case study; new type examination questions; libraries, organization and conduct; bibliographies; endowments; loan funds; scholarships; health programs and how to introduce them in a school; salary schedules; budgets; comparative cost to the hospital of a graduate nurse staff and maintaining a school; records; personnel classification; commencement exercises; ward equipment and classroom equipment; duties of nurses' examining boards; preparation and opportunities for male nurses; preparation and opportunities for trained attendants.

Financing Hospitals in the Australian States

Australian states have various methods of financing their hospitals, according to the *Journal of the American Medical Association.* At the present time funds for pubic hospitals are inadequate as shown by the appeals for increased government grants and voluntary subscriptions and the shortage of bed accommodations.

In New South Wales, the minister of health has indicated that he could find immediate use for a million pounds to liquidate hospital overdrafts and to provide urgently needed accommodations.

In Queensland, financial benefit is derived from a fortnightly state lottery that is conducted in the interest of medical charities.

In Victoria the shortage of hospital beds is acute. Melbourne has had for the last five years a central organization, similar to the American community chest, called the lord mayor's fund, to which contributions are made. It has been suggested that Victoria increase hospital grants by the Queensland system of a state lottery or by imposing an increased betting tax.

In New South Wales, the entertainment tax method is favored, with a motor tax to take care of the treatment of motor casualties.

Choosing Personnel*

By L. C. AUSTIN
Superintendent, Mt. Sinai Hospital, Milwaukee

THE saving of peoples is a master stroke of economy, says Calvin Coolidge. Had he had in mind hospitals alone he would have struck the basic principle upon which every hospital of the world is founded, that of saving people. One hospital may, through its efficiency, consistently save more lives and money than another. Efficiency therefore, is essential to economy as well as to success. Efficiency can be measured only by methods of operation, it being assumed that each hospital has the same facilities with which to work.

The integral part of any method is the personnel. Not every man can run an automobile, no matter how hard he tries. Neither can every man handle a ditch digger or a steam engine. Taxi companies are continually in search of good chauffeurs. The best company has the best drivers, and the same principle holds true in every line of work. Therefore, the right personnel in the hospital will result in a working out of the right method.

To find the right employee for the right place should be the chief aim of the employer. To get the most efficient employee, a fair salary must be paid. When we want a roentgenologist, pathologist, dietitian or superintendent of nurses, we do not indiscriminately choose anyone who may apply. When we employ such persons we pay them in accordance with their positions. In positions of this nature we pay for knowledge and technique.

Pay Well for Good Help

But when we hire other help it appears that almost anybody will do, and the salary is usually ridiculously low. It is economy to hire the right man and pay him an adequate price. To illustrate: A hospital superintendent had his own force of would-be mechanics working on the repair of a piece of apparatus that had broken down. They struggled two days and finally gave up, saying it could not be repaired. A new piece would cost $20. The superintendent decided that before replacing the broken part he would call in outside help. A man who applied was given the job. When the superintendent received a bill of $11 he was astounded and wrote for an itemized statement. This is what he received:

Time, one hour	$ 1
"Knowing how"	10
Total	$11

The bill totaled $11, and the superintendent had already spent the time of his own employees who did not "know how." He was spending more money than a new piece of apparatus would have cost.

Another illustration is the squirrel in his rotating cage. He pedals from sun-up to sundown; wastes his time and his energy; has four aching feet and possibly a headache. He may travel several miles but he fails to get anywhere. The same is true in many of our hospitals. We hire cheap help who waste our time, accomplish little, and at the end of the day, the week or the month, we are the ones who have the headaches, with our aims unaccomplished and our expenses mounting.

Choose Competent Help

Many of us allow our sympathy to guide us in either hiring or holding help. The employee may be old and homeless and may be hanging on merely for an existence. In retaining him we make ourselves feel that we are saving money. Perhaps we are, temporarily, but we cannot be saving indefinitely, and eventually we will be paying more than we were saving. Even an orderly who in most hospitals is paid between $60 and $75 a month may be worth more than he is paid. In Mount Sinai Hospital, Milwaukee, we have an orderly to whom we pay $115. Outside of his regular work, he repairs and sharpens surgical instruments, makes plaster casts for the doctors, and fulfills other similar duties. He is saving the hospital $50 a month.

At one time Mount Sinai Hospital spent more than $400 a month for nine months for outside maintenance help. After getting the permission of the board of directors, I found the man I wanted, a first-class cabinet maker, good carpenter, electrician and second-class fireman, with a splendid knowledge of plumbing and heating, and I hired him at $160 a month. That saves the hospital more than $200 a month, or $2,400 a year.

The personnel in the maintenance department

*Paper read before a joint meeting of the Hospital Association of Illinois and the Wisconsin Hospital Association, Chicago.

depends of course upon the size of the hospital but usually an engineer, plumber, electrician and carpenter are needed. The following salaries may be paid:

In a large hospital: engineer, $200; plumber, $190; electrician, $160; carpenter, $160; total, $710.

In a medium sized hospital: combined engineer and plumber, $250; combined electrician and carpenter, $175; total, $425.

In a small hospital: combined engineer, plumber, electrician and carpenter, $275.

Large institutions will have to pay approximately $710 a month for competent help. The middle-sized hospital should be careful in its selection of maintenance men, should choose those who are qualified in more than one branch and should pay them accordingly. This is a little more than half what the larger institutions pay for the same type of personnel. The small institution which needs only one maintenance man should be exceedingly careful in its selection and should get one who is competent in all of the foregoing branches. Such persons are difficult to find but, when found, should be paid in proportion to their responsibility. When a hospital superintendent has selected his personnel, he may then shift the weight of the responsibility of the upkeep to that capable group.

After the problem of choosing the personnel is settled, room should be set aside for a shop or shops, the number depending upon the size of the institution. Necessary tools should be provided and also, if needed, certain machinery for speeding up maintenance.

At Mount Sinai we bought an electric hand drill for $28. Not only has much time been saved by it, but also the energy of the repair man has been conserved.

Schedule Adopted in All Departments

With personnel, tools and a place to work, the only thing that remains is the method of operation. Everything should be run on schedule. One hour, one day, one week or one month should be concentrated on certain lines of maintenance. This scheme also depends upon the size of the institution.

In Mount Sinai we have a slogan: "Fix it once and fix it well or not at all." If any piece of machinery gets out of order within an unreasonable length of time, we discard it and put in a new one. This goes for practically everything below $50 in value. This has done more to create harmony and maintain cooperation in the hospital than any other one thing.

When a project of major importance must be planned a conference is called of all who are interested in it. The superintendent presides and the proposition is presented. Plans are outlined and every man on the maintenance force is told what his part in the project is. He is given his problem and he must work it out. He has the advice of every other person in the group. In this way fewer mistakes are made and everybody has a chance to voice his opinion. This plan is followed in every modern factory and business house. Why should it not be done in the hospital?

New Equipment Thoroughly Inspected

Every piece of new, as well as old, equipment is rigidly inspected before it is allowed to give, or to continue to give, service. Many times new equipment needs reinforcement to meet the hard usage of the hospital. Chairs are reinforced with wire, wheel chair seats are reinforced, bumpers are put on, and all those things necessary to a better preservation of the furniture are given attention.

Only recently at Mount Sinai we bought a new oxygen tent, mounted on wheels. After inspecting it carefully, we found that large extra oxygen tanks had to be brought in and that while the change was being made from one tank to another the patient suffered from the lack of oxygen. A new platform was devised, large enough to support the original machine plus two 3,200-gallon tanks of oxygen. Now the whole system can be moved at once by one nurse or intern, and when one tank of oxygen empties, manipulation of the valves permits a continuous flow of oxygen to the patient. This gives the nurse a leeway of at least eight hours to get the empty tank replaced and saves much hurry in the early hours of the morning if the tank should become empty. Had we had this new truck and platform made outside the hospital it would have cost $90; as it was, the only cost was for a few boards and bolts and six hours of our carpenter's time, all of which cost less than $25.

At our hospital we asked for bids on the cost of knocking out a brick wall 9 feet by 9 feet by 16 inches, replastering the seams and putting in two electric fixtures. It could not be done for less than $250, we were told. "Knowing how" was again the expensive item and our men did the job at an actual cost of $77.45, time included. We built an up-to-date morgue table, such as sells for close to $500, for less than $250, time included.

Salvage is an important item. Before any piece of equipment is destroyed it should be taken apart and every part carefully examined, with the idea that it may prove useful later. Convenient box shelves or drawers should be made, to classify and

hold all mechanical parts. The carpenter should be instructed to save every piece of material worth saving, no matter how small it is, because it is likely to prove useful at some time. Boxes in which goods are shipped to the hospital should be broken apart and saved, if possible. For more than a year at our hospital we have been replacing backs of mirrors and bottoms in drawers with veneer panel board taken from boxes in which linen was shipped to the hospital.

Inspection is of vital importance. After each patient leaves some one from the maintenance force should be delegated to inspect the room thoroughly, checking up on the windows, bed, dresser, chairs, radiators and everything that is to be used by the incoming patient. This helps to make every new patient feel more comfortable and he leaves with the feeling that his room was shipshape, a compliment to the maintenance department of the hospital. Daily inspection of all plumbing and steam heating should be carried out each morning to insure an uninterrupted day's work for the others.

The superintendent and heads of departments should cooperate in regular weekly inspection of the hospital and should report anything which it seems to them should be altered or remedied. In departments in which factory equipment is in use, such as the laundry and x-ray departments, a factory representative should be invited to come in to help inspect. This service is usually given gratis and results in recommendations for improving the equipment which can be carried out by the hospital staff of mechanics.

Use Good Quality Materials for Repairs

The best quality of parts should be put into repair jobs. They may cost more at the beginning but are cheaper in the long run. I remember one repair job particularly. It concerned the replacing of steam pipes in one of our steam tables. Three times in a year they had to be replaced and each time it cost about $4.50 for the piping, threading, elbows and other materials, not considering the time involved. I replaced them with brass piping and fittings at a cost of $7.35 and they have been in use fifteen months and are still almost as good as new. I am now replacing all worn-out iron nipples and other small parts in our heating and plumbing system with brass.

When everything is in working order and every employee is a satisfied employee, a hospital is ready for almost any kind of an emergency. The superintendent will be surprised at the harmony among his workers. What a satisfied feeling it gives him to know that the employees respect him and will cooperate with him to the fullest extent.

What Does the Staff Owe the Hospital?

The primary duty of every medical man is, of course, to bring relief to the sick, and to prevent the spread of disease. So is it the primary duty of every member of the medical staff of a hospital first to serve the patients in the hospital. According to an article that appeared in a recent issue of the *New England Journal of Medicine*, these staff members have a secondary duty which is as important as the first. This is the duty of the staff man to the hospital.

The development of hospitals has presented to the physician the opportunity for laboratory study, concentration and systematization of work, and improved facilities with which to work. It has enabled the medical men to work together, to compare notes and to share each others' problems, all of which has a broadening influence on his store of knowledge. It is through these contracts and the continual increase in knowledge that a staff member obtains that he contracts certain physical, moral and ethical debts to his hospital.

These debts can best be paid through loyalty and unceasing efforts to prevent his hospital from becoming stagnant, insofar as modern equipment and modern medicine and surgery are concerned.

Cooperation with the public, the superintendent and the trustees is essential. Regular meetings of the staff should be held and a committee should be appointed to keep alive the contacts of the staff with the trustees. At least one member of the staff should attend all meetings of the board, and whether or not he has any voice at these meetings, he should encourage, in every way possible, every action that will aid the hospital and the staff to serve the patients better. At the staff meetings the superintendent should be induced to present matters of administration for consideration.

Lastly, it should be the desire of every staff member to see the hospital become the center of medical activity in the community.

Mental Hospitals Crowded—Number of Patients Increasing

An authoritative statement published in a late issue of the *Hospital, Medical, and Nursing World* carries the information that insanity in its various stages is increasing, and that mental hospitals throughout the United States and Canada are overcrowded.

Enlightenment as to one of the causes of this condition can possibly be obtained when it is known that medical men to-day are concentrating more of their interest on the mental patient than they ever have before, and, due to this, varying and inclusive grades of insanity, many of which have just recently received recognition, are being treated. The fact that more attention is being paid to this type of work requires that more space be devoted to it also.

With some twenty-four thousand mental patients in Canada and the limited facilities for handling them, the condition has reached a critical stage. In the province of Ontario, the provincial government has been forced to return to their homes a number of the less seriously afflicted patients in order to make room for those who are badly in need of institutional care and who are a menace to their fellow men.

Why Hospitals Merit Support

By HAROLD L. FOSS, M.D.
Surgeon in Chief, Geisinger Memorial Hospital, Danville, Pa.

FOR twenty years my working day, from morning until night, has been spent in hospitals. I know of their needs, their perennial struggle for adequate equipment and financial support, the manifold blessings conferred by them on suffering humanity.

The average person knows surprisingly little about his body and its physiological processes, and until he is attacked by disease he seems to feel no interest in how sickness may be warded off or overcome. Yet all of us sooner or later become ill. We dislike to think of doctors and of their offensive drugs, of hospitals and surgeons with their glittering armamentarium. Yet no one knows when his turn may come or can predict how long those near and dear to him will continue to escape serious injury or illness.

Ten million people enter the hospitals of this country every year. In a city of average size, in a period of ten years, the patients passing through the hospitals about equal in number the city's population. Hospital property in the United States to-day represents an investment of over $5,000,000,000, in 6,900 hospitals, containing in the aggregate over 800,000 beds. "This is an age when dangerous occupations multiply," says one authority. "The streets are filled with rapidly moving, death dealing vehicles; every few stories of a great modern building mean one man dead and many injured; every twenty miles of railroad in the country mean a man killed and every three miles mean a man injured; great machine shops and factories crush and mutilate, and deadly electric currents are on all sides of us. Closely adjacent to the hospital are the slums, the inhabitants of which, when injured or diseased, know no recourse but the hospital."

An Employee for Every Patient

Let us consider for a moment some of the problems constantly confronting hospitals. To the average hospital the greatest problem is that of cost. Of the items affecting the financing of a hospital of, say, 180 beds, the largest and most important is the pay roll. Are you aware that as many employees are required as there are patients? And in many hospitals the ratio is even higher than one to one. As an example, at the Johns Hopkins Hospital, Baltimore, over 600 employees are required to care for an average of 400 patients.

After the pay roll, in the order of importance from a financial standpoint, comes the power and light item. In such a hospital as we are considering it costs $20,000 a year for power, heat and light, and in that time $45,000 worth of food and groceries are consumed. There is the item of medicine and medicinal supplies, and there are a hundred other smaller items, such as repairs and insurance and the purchase of new equipment, all helping to swell the total of hospital operating cost, which amounts annually to about $200,000.

Where Does the Money Go?

You will of course ask, "What in the world makes the cost so great? What is done with the money? Where does it all go? What is bought with it?" Here are a few of the items and the quantities of them that are needed each year in a modern hospital of 180-bed capacity. In one year there will be consumed one and one-half tons of absorbent cotton and 60,000 yards of gauze. The surgical gauze used annually in such a hospital would make a pathway one yard wide and thirty-four miles long. Then there is the linen item. How much does your household linen cost you? How much do you think it costs the hospital? Well, throughout the year the purchases of new linen in our hypothetical hospital would amount to over $100 per week. There is the item of catgut, an important one in the operating room. If all the strands used in a year were tied together and stretched out they would reach from Scranton to Pittston. The catgut item alone amounts annually to $2,000. The hospital would use each year over 500 quarts of ether and 60,000 gallons of nitrous oxid gas and oxygen; 15 tons of beef; 4 tons of lamb; 4½ tons of chicken, 1½ tons of bacon; nearly 10,000 dozen eggs; 4½ tons of butter; 42,000 quarts of milk; 7,000 quarts of cream; 3,600 dozen oranges and 3½ tons of fish.

Times change and our lives alter and although here and there a slight decrease in the prices of certain items is noticed, it still costs nearly 200 per cent more to operate a hospital than it did in prewar days. A few years ago hospitals were but

boarding houses for the sick. They were dingy, ill kept structures, reeking with the odor of iodoform and onions. What a contrast to the modern fireproof buildings of to-day, which are cheerful, well ventilated and equipped with complex apparatus and instruments of precision. All this costs much money. Medical science has kept far ahead of the willingness of the populace to support hospitals adequately. New and marvelous devices for the diagnosis and treatment of disease are invented but there is almost always a lack of money with which to purchase them. Hospitals need radium, costly laboratory apparatus, electrocardiographic apparatus and instruments for basal metabolic determinations, so that they may benefit by the recent developments in medical science, aimed at relieving suffering and lowering mortality.

Ten years ago when we wished to put a patient to sleep before operating upon him, a bath sponge was wrapped in a towel or newspaper and ether poured upon it. That was all. To-day in my operating room is a machine used for the self-same purpose but costing $600. Is it worth it? Of course it is, for this machine will save dozens of lives each year, lives that otherwise would be lost. In the hospital with which I am connected we installed, in 1915, at a cost of over $10,000, what was then the finest x-ray equipment in Pennsylvania. In twelve years it has become obsolete and has just been sold for $1,800 and is being replaced by new apparatus costing $13,500. These are but two of the hundreds of reasons why hospital equipment costs so much and why hospitals so urgently need help.

Hospital Has Nothing to Sell

It is obvious that a hospital has nothing to sell. It trades in nothing; it manufactures nothing. It has upon its shelves no groceries, no dry goods, no bar iron. For the product of the modern hospital is health and the alleviation of suffering and it is turned out with a varying degree of success, depending partly upon the patient and the disease from which he suffers but largely upon the physical appointments and equipment of the institution and upon the degree of sympathy, loyalty and generous financial assistance bestowed upon it by the community which it so devotedly serves.

Any man, irrespective of his station or financial status, who goes shopping for groceries or dry goods or bar iron expects to pay for his purchase and does pay for it. But it is all very different with the man who applies at the hospital for the relief of suffering, the cure of disease and the restoration of health. If he drives up in a Packard limousine he pays in full for his purchase. If he comes in a Ford he usually pays. If he walks, he may pay in full or in part. But if he comes in an ambulance, leaving a tuberculous wife and a family of underfed, scantily clad children at home, under a leaky roof that he does not own, and if he is overwhelmed in debt, he pays nothing and is not expected to pay. He is welcomed with open arms and with sympathetic kindness and is given modern medical and surgical treatment. He is restored, if possible, without the slightest cost to him.

To find funds for the adequate care of such patients is the hospital's greatest problem.

Hospitals Operate at a Loss

Hospitals are open day and night, week in and week out. They are operated at great financial loss and are conducted for that great humanitarian purpose, the combating and conquering of our common enemy, disease. A business enterprise would go into bankruptcy in a month if its policy were to accept pay for only a half or a third of its product and give away the remainder, yet this is just what most hospitals have always done and are continuing to do, a thing but few persons seem fully to understand. Hospitals have a definite place in the everyday life of the average citizen, and are so closely linked with our physical welfare as to make them of unparalleled importance throughout the land. It has been aptly remarked that the triumvirate of our present day civilization is a combination of the church, the school and the hospital—the church with its gospel of tolerance and brotherly love, the school with its message of understanding, enlightenment and culture, and the hospital with its continual warfare on all forms of human disease.

Every year ten million persons pass through the hospitals of the United States, and this number is steadily increasing. This does not mean that disease is increasing. On the contrary, disease is yearly becoming less, but more people realize that their chances of recovery from the serious forms of disease are incomparably greater in the hospital than in the home. When a man is saved from death or rescued from sickness he returns to the support of a family that might otherwise be a public charge, and he becomes again an industrial unit, a factor in the production of wealth, a factor that adds to the power and greatness of the commonwealth.

Hospitals have two functions. One of them, the major one, is the care of the sick and injured who come to their doors. But there is another which, I think, is of almost equal importance. This is the age of preventive medicine. New discoveries are being made from day to day and they

must be carefully considered and tested before they can be placed before the public. Therefore the properly equipped hospital with its research laboratories, wherein the problems of preventive medicine can be investigated, is one of the greatest agencies in the advancement of civilization.

The Value of Laboratory Research

Let me cite one of a thousand examples of the hospital laboratory's contribution to the relief of human suffering. The annual typhoid incidence of 0.37 per thousand for American troops during the World War, differed tremendously from the rate of 141.59 in the Spanish-American War. In an army of average strength of more than 1,500,000 in the World War, the typhoid admissions numbered 1,529; while in 1898, with an army of about 148,000 men, the number of cases of typhoid fever reached the appalling number of 20,926. This tremendous saving of life is attributed to antityphoid vaccination, the result of hospital laboratory research.

In this connection I quote from a recent number of the *New York Times:*

"It is not many months since Prof. Adrian Stokes succumbed to yellow fever, which he contracted while engaged in research on disease, for the Rockefeller Commission in West Africa. The death in the same manner of another great man, Hideyo Noguchi, has only just been reported. Now comes the sad news that Dr. William A. Young, director of the Medical Research Institution of the Gold Coast, who was a colleague of Stokes and Noguchi, has succumbed within eight days of the death of the latter to what appears to be the same cause. A singularly able, patient and kindly man, he seemed destined to make a great name in the field of tropical medicine."

I knew Doctor Noguchi, that marvelous Japanese investigator, whose medical discoveries will result in saving the lives of countless thousands. He was a great man, a true scientist, who had devoted his life to research in the hospital laboratory. His will has just been admitted to probate. His entire estate amounted to less than $12,000.

Nurses To-day Are Overeducated Physicians' Committee Holds

Pupil nurses are younger and less considerate to-day than formerly. They are noisy, perform their duties mechanically and display little humility when they make mistakes. The present superintendent of nurses is a desk official who issues orders "while remote from the field." These complaints against present day nursing service were incorporated in the report of the committee on nursing education to the house of delegates, Michigan State Medical Society, submitted at the Detroit meeting, according to the *Journal of the American Medical Association.*

Nurses are overeducated the committee believes and says that nurses are helpers and agents of physicians, not coworkers and colleagues. The report further goes on to say that physicians should have a part in the direction of the training of nurses and in its limitations as should the hospitals that give the training; that the training of nurses should be simplified and the time of undergraduate training reduced to not more than two years; that the apprentice system must be maintained; that the cost of nursing can be reduced by the introduction of instruction in simple nursing technique in the public schools, so that home nursing by members of the family can be available to a great degree, by shortening the present training course, by the establishment of more hospitals and by the more frequent use of group and hourly nursing.

Qualifying as the Superintendent of a Small Hospital

Many times a person who seeks a superintendency of a small hospital does so without realizing the extent of the practical knowledge needed for such a position. Evelyn Buchan, superintendent, Weedn Hospital, Duncan, Okla., in the following questions summarizes the various qualifications a prospective superintendent must have:

Do you realize that your duties require from fifteen to twenty-four hours of your time each day and that you must be available at all times?

Are you willing to do any strenuous work and apply yourself to the demands of the institution?

Do you know how the laundry, cooking and scrubbing should be done? Are you prepared to do physiotherapy, laboratory and x-ray work if necessary?

What knowledge have you of conducting a training school? Have you had any experience in teaching? What is your executive ability?

Do you realize that your duties may require your supervision in any department from the engine room to nurses' home, and that, in fact, the time spent in your office is so short that you will have no need for an easy chair as part of your office furnishings?

Compensation Should Cover Hospital Charges, Board Rules

When an industrial worker is hospitalized under the Workmen's Compensation Act and when the hospital presents a bill for $137.75, the cost of care for the first thirty days following the injury, then the agreement covering the compensation should include the full amount of the bill and should not be limited to $100.

This in effect was the outcome of a case cited in *Pennsylvania Progress* in which a chairman of the Workmen's Compensation Board had allowed the claimant for compensation only $100, even after the superintendent of the hospital had sworn that his bill was based upon the prevailing charge to all patients. When the case was again brought before the board, the new chairman awarded the claimant the full amount of the hospital charges, saying that it was an error under such circumstances to limit the amount to $100.

Providing Private Room Facilities for Tuberculous Patients

By ROBINSON BOSWORTH, M.D.
Superintendent, Rockford Municipal Sanatorium, Rockford, Ill.

IT IS still surprisingly common to find tuberculosis sanatoriums planned to afford accommodations only in wards, with possibly a few single or double rooms representing 10 per cent or less of the total bed capacity of the institution. In addition to this low percentage of single rooms, the lack of facilities for rendering hospital care to the bed patient is worthy of comment.

The Rockford Municipal Sanatorium, Rockford, Ill., three years ago, had a total capacity of seventy beds of which six were in single rooms. Of necessity, these six rooms were used for the most serious cases. Naturally a proposal to move a patient from a ward bed into a single room usually suggested that the end was approaching. If this were not the case, it was often difficult so to convince the patient.

Usually, among sixty-three ward patients many are ill enough to demand bed care, including bed baths, bedpans and food trays. Our patients come from every station in life—rich, poor and middle class. Accommodations are assigned according to the illness and needs of the patient and not according to what might be the patient's preference. Ward patients, therefore, should be those whose condition has improved to the extent that at least bathroom privileges may be safely given.

Were sanatoriums planned according to the above ideas, private rooms would be available to accommodate a much greater percentage of the total bed capacity than is the custom in a large number of tuberculosis institutions to-day.

About one year ago, construction was begun at Rockford Municipal Sanatorium on a three-story fireproof infirmary or hospital building in an effort to correct the condition resulting from a lack

New infirmary at Rockford Municipal Sanatorium, Rockford, Ill., showing connection by passageway to old building and driveway under passageway. The ground slopes from each side of main entrance so that all rooms in basement or first floor are above the grade.

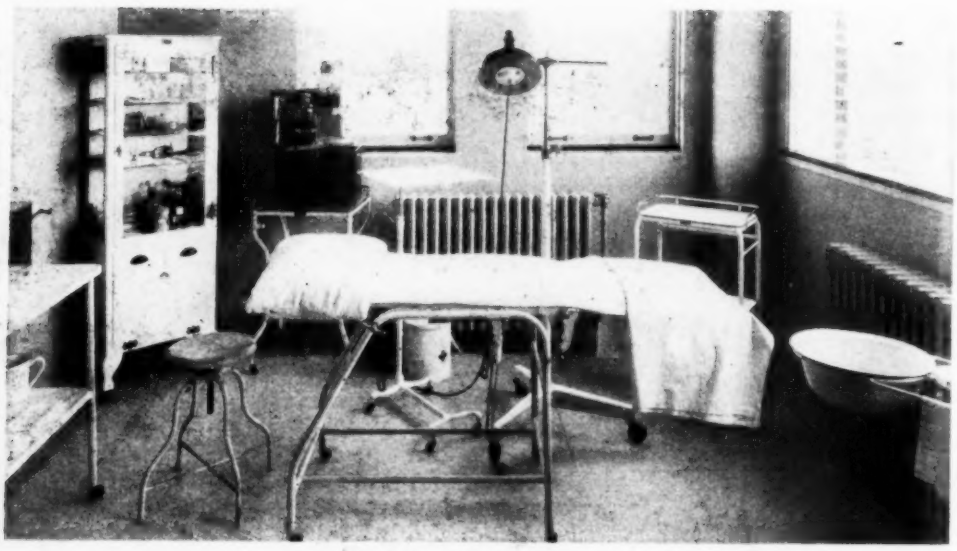
of isolation quarters and, in addition, to increase the bed capacity to a point nearer the demands made upon the institution by the tuberculous population of this country.

The sanatorium having a capacity of only seventy beds, six of them in single rooms, there had been a long waiting list of applicants for admission, totaling sometimes as many as eighty.

The infirmary building was completed and put into service May 1, 1928. It affords accommodations for forty-six patients, twenty in double rooms and twenty-six in single rooms. On account of the shortage of housing space for nurses and other employees required to operate the enlarged institution, it has been necessary temporarily to use for ten nurses space intended for ten patients. For this reason one-half of the top floor has been set aside for nurses, separated from patients' quarters by a stairway, an elevator shaft, a nurses' office, diet kitchens, an examination room as well as a nurses' utility room.

In providing for an increase in capacity by the construction of a three-story building, it was also possible to reserve one floor, the lower, for administration purposes, the x-ray department, the laboratory department and dental and operating rooms, and still provide six rooms for male employees, a morgue, a storeroom for patients' effects, a janitors' supply room and a large temporary schoolroom for child patients. This arrangement is shown in the basement floor plan.

Typical two-bed room, showing three three-sash windows, light over each bed, signal cord and radio outlet for head phones.



The operating room receives abundant natural light, and for night work a movable service light is used.

The construction is of reinforced concrete with hollow tile and brick outside walls. Floors are of terrazzo over concrete slab, except in the corridors on the second and third floors and the x-ray department, where the floors are of rubber tile.

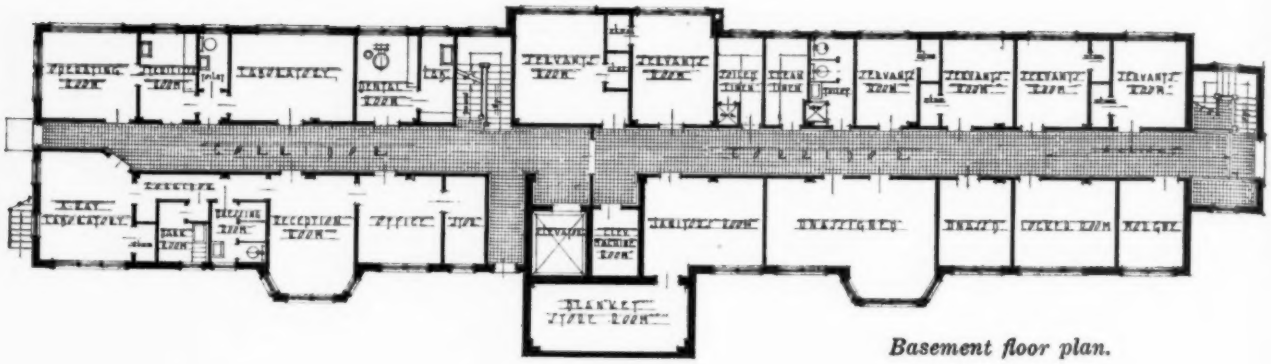
All doors are flush panel, equipped with non-slamming friction hinges and without door knobs, arm hooks being used. They are of sufficient width to permit the easy passage of a bed. Pa-

Reception room opposite main entrance and elevator. There is a similar room on the second floor.

tients' furniture is of walnut finished steel, and includes a bed, a dresser, a bedside table, one straight back chair and one rocker, both with leather seats.

The roof is flat or nearly so, surrounded by a four-foot wall or parapet and it is used for heliotherapy. Adjoining the elevator house on the roof are toilets and sun rooms for each sex. Glass designed to permit the passage of the therapeutic rays of the sun is used to enclose both sun rooms. At present one of these rooms has been equipped also for treatment by carbon arcs, two twin 45-ampere arcs in series being hung in the center under a large reflector, with a ventilator extending from the dome of the reflector up to and above the roof. Both sun rooms are heated by

The medical director's office is simply but practically furnished.



Basement floor plan.

fresh air drawn from above the roof and heated by steam before it enters the rooms.

Every patient's room is equipped with a nurses' signal system, a radio outlet with head phones and a wall plate for an electric fan or heating pad. A clothes closet of good size adjoins each room, in which is a lavatory with hot and cold water, a built-in cabinet with a mirror and an electric light. A gooseneck type faucet enables nurses to obtain water for bed baths without having to leave the patient's room. The windows are large, with three sashes, admitting an abundance of fresh air. There are no porches. A bathroom is also provided near each group of twenty patients, as well as a separate toilet room. The bath is raised twelve inches from the floor on a concrete and terrazzo base and is set out from the wall to permit the nurse to get around it.

It will be noted from the plans that the service quarters are centrally located. A nurses' office on each floor provides a good view of the elevator entrance, the stairway and the reception room for visitors. Directly opposite the nurses' office is the diet kitchen, in which the nurse can receive a call signal from patients should she be busy in the diet kitchen. Next to the nurses' office is the utility room containing utensil sterilizers, a bed-pan hopper and sterilizer and a sink. This room also receives call signals from patients' rooms.

On each patients' floor is a good sized linen room for clean linen, also an opening to the linen chute leading to the soiled linen room on the first floor. On each floor a janitors' closet is provided near each end of the corridor for the storage of small utensils. This closet contains a janitors' sink. A janitors' sink is provided also in the men's toilet on the roof and another in the large janitors' room in the basement.

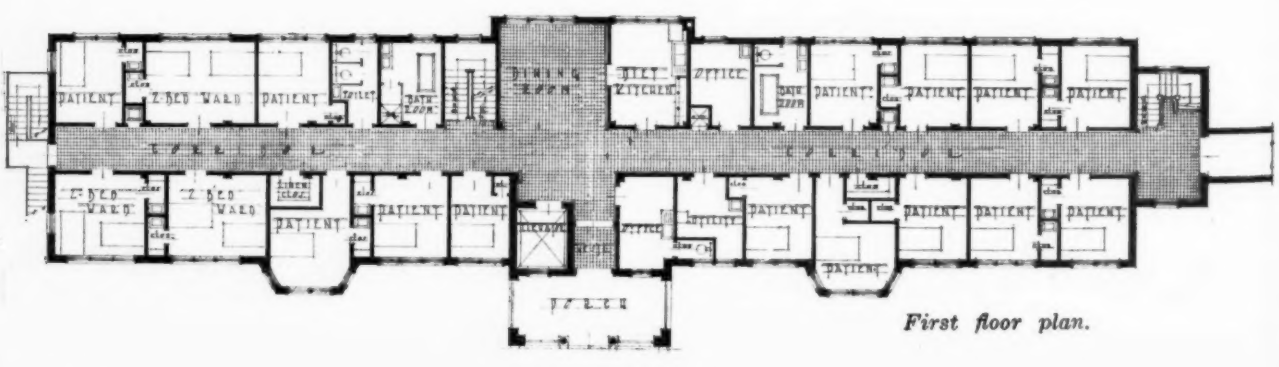
The reception or recreation room, one on each patients' floor, is equipped with a large round table where patients may receive their meals should they be permitted to walk that far. Patients on bathroom privileges prefer to slip on bath robes and sit around a table rather than to have all their meals served on a tray, and such service is much more simple for those serving.

This building is so located that a passageway connects it with another building containing the main kitchen. All foods are prepared in the main kitchen and delivered by heated food wagons. Trays are set up and deliveries made direct to patients from diet kitchens on each floor of the infirmary. All dishes are washed and kept in the diet kitchen, only the food wagons being returned to the main kitchen.

The general contract, including structure, lighting, heating and elevators, amounted to $2,194 per bed. The source of heat, light and water already existed on the grounds. Furnishings, including laboratory, x-ray, offices and radio, brought this total to $2,544 per bed.

The architects were Bradley & Bradley, Rockford, Ill.

All patients' rooms were furnished from funds donated by interested groups of officials, church organizations, fraternal societies and granges.



First floor plan.

A Proposed Bureau of Hospital Research

By CARL E. McCOMBS, M.D.
National Institute of Public Administration, New York

THE tremendous expansion of the field of hospital service in the last quarter century has brought with it increasing necessity for continuing research in hospital problems. New and pressing questions on hospital planning, financing, construction, equipment, administration, operation and public and professional relations are always before us.

To meet the need for cooperative study and exchange of information on these matters, great national and regional hospital associations have been formed, which through their special research committees are making an earnest but inadequate effort to keep abreast of the ever growing demand for more facts on which to base cooperative efforts for hospital betterment. In spite of the untiring efforts of these committees we have as yet merely scratched the surface of a great mine of hospital fact. Is there not some better way to uncover and utilize all the fact sources available to us and by a wider dissemination of information coordinate as well as accelerate the movement toward higher efficiency in this important public welfare enterprise?

The voluntary committee plan of study of hospital problems is uneconomic to say the least. Anyone who has been privileged to work with a voluntary committee which is engaged in studying an important hospital problem, but whose members are scattered to the four winds, knows how time consuming and unsatisfactory this method of work is. Lacking funds to defray the expenses of meetings and to pay for efficient secretarial, stenographic and clerical service, members of committees are forced into extravagant use of their own time and the time of their personal employees. The result all too often is that the actual work of the committee falls upon the one or two members who are best able to carry the load; meetings of the whole committee are infrequent because of the cost to members, and the final report of the committee is produced without opportunity for thorough discussion by the committee in group conference.

As one who has worked for and with many committees of organizations concerned in hospital research, I have only the highest praise for the self-sacrificing efforts of such committees to make a real contribution to the public welfare. Many times they have had to dig deeply into their own pockets to pay the expenses of inquiries that were important enough to justify appeals to philanthropy. But although philanthropy has contributed amazingly to hospital construction and maintenance, it has contributed little to the support of the research necessary to proper understanding of hospital affairs.

Whether the plan herein proposed for the establishment of a bureau of hospital research appeals to philanthropy or not, it should, I believe, appeal to those of us who are vitally interested in discovery of the facts about the great hospital system of the country and the application of those facts to every-day hospital needs. When

Is the Time Ripe?

Many scientific associations, industrial organizations and large civic agencies have adopted the practice of establishing research bureaus for the purpose of recording and analyzing facts regarding the matters with which they are concerned and for interpreting these facts through published reports to association members and the general public.

Doctor McCombs here suggests that the time is ripe for such a bureau to be established in connection with the hospital field, a bureau whose work would be to uncover and make available to hospital workers and the general public the wealth of pertinent information now undigested and more or less buried. THE MODERN HOSPITAL is anxious to receive comments on the proposed bureau as here outlined by Doctor McCombs.

and in what relation to existing hospital associations or conferences such a bureau can best be established is a question requiring further study. As to the cost, that will depend somewhat upon the results of such further study, but an estimate of from $8,000 to $10,000 a year is suggested as representing about the minimum amount needed. Undoubtedly it would be desirable to bring such a bureau of hospital research into close relationship with one of the already existing national hospital associations or conferences, and to incorporate in it such informational facilities as are now available. This would have the advantage of providing proper administrative supervision for the proposed bureau, would reduce its cost and would guarantee its cooperative relations with the great body of independent hospital units.

How Bureau Would Function

The proposed bureau of hospital research would have two chief functions. The first and most important would be to serve the various voluntary committees of the association or conference with which it is identified as a fact finding agency. The voluntary committees would meet as at present, determine their plan of action and outline the nature of the information required. The bureau of hospital research would then be directed to carry on the necessary inquiry by questionnaire, correspondence or otherwise, analyze and summarize the information secured, and report its findings to the committees. The committees, after preparing their reports, would then transmit the reports to the bureau of hospital research for final typing or printing and transmission to the proper sources. In this way the number of committee meetings could be reduced, the time and money of committee members saved and their services called for only when actually needed.

The second function of the bureau of hospital research would be to establish contact with all existing sources of information on hospital affairs and to utilize their fact finding facilities to supplement its own. The number of such sources is legion and as yet no satisfactory method of tapping them has been devised. Associations of manufacturers of hospital materials, supplies and equipment, associations of fire insurance companies, associations of technical and professional workers, departments of state and federal government, national, state and local chambers of commerce, national, state and municipal agencies for governmental research, and scores of other organizations are interested in hospital affairs and many of them are in possession of facts of great value to hospital workers.

The research bureau plan is one that has taken a significant place in modern life. There are bureaus of industrial research, commercial research, government research, social research, religious research and what not. After an intimate contact with many agencies of this type over a period of about twenty years, I have no hesitation in saying that they have more than made good in their respective fields. That a bureau of hospital research will make good can almost be taken for granted. Here is a group enterprise, representing hospitals of all types, spending annually hundreds of millions of dollars, dealing with every variety of thing and with almost every conceivable human interest, a public necessity whose influence upon public health and welfare is beyond calculation. As yet, however, those who have the interest of this enterprise at heart have not formulated any well organized plan for getting at the pertinent facts. Time and again those responsible for a hospital enterprise have accepted policies, undertaken programs and committed themselves to this or that theory, only to find later on that a little more careful study would have saved costly mistakes.

The hospital business has now reached proportions that make it practically impossible for the voluntary committee research plan to function efficiently. Is it not time to consider a more effective method of approach to the solution of hospital problems? Does not the plan here recommended offer such a method?

Success of Hospital Depends Upon Medical Staff

The efficient functioning of any hospital is dependent upon a well organized medical staff, because such a staff precludes any chance of carelessness in the examination and treatment of patients, is the belief of Dr. Allan Craig, New York, whose recommendations on staff organization were set forth in a talk before the annual meeting of the New Jersey State Hospital Association.

"Any business enterprise, if it is to succeed, must be efficiently organized," said Dr. Craig, "and hospitalization is distinctly a business. Its ultimate aim is to promote the recovery of the sick as quickly and as efficiently as possible. The patient's welfare comes first."

Dr. Craig then outlined the divisions of what he considers a well organized medical staff, namely, the consulting staff, outstanding members of the profession qualified to act as consultants; the active staff, which has full privilege of the hospital and is responsible for the care of public ward or free patients; and the courtesy and associate staff, qualified practitioners who are permitted to treat their patients in the private rooms of the hospital.

The officers of the staff usually consist of a chairman, a secretary and an executive committee. Other committees such as a program committee, an efficiency committee and a record committee are in most cases necessary.

STUDIES ON HOSPITAL PROCEDURES

Small Hospital Finances

IT can be stated with much truth that the chief difficulties encountered by those responsible for the conduct of hospitals under 100 beds concern themselves with finance. Money, to institutions of all sizes, is a difficult commodity to secure. Indeed, many of the adopted policies are of necessity affected by this difficulty in obtaining funds to carry on even the basic activities of the community institution.

It is unfortunate that many times even the method by which patients are nursed is predicated on a need for the saving of money. While there is no excuse for the existence of a school for nurses for this reason alone, it cannot be denied that boards of trustees are too frequently influenced by the economic aspect of the problem rather than by a desire to meet an educational need. In passing, it may be added that to conduct properly the educational venture, represented by the hospital's school for nurses, requires the spending of a considerable amount of money. When the school is organized, with the aim of working an economy, it is often improperly conducted if the expense is in any great measure less than that necessary to maintain a staff of graduate nurses.

The Board of Trustees' Responsibility

In every community, usually a group of wealthy, philanthropic and unselfish individuals comprises the board of trustees of the local hospital. This position is often a thankless one. The community owes a debt of gratitude to these fine men and women who sacrifice their time and often contribute of their wealth to maintain adequate facilities for the treatment of the sick. This group in many localities, often with few personnel charges, labors from year to year without recompense and too often with unjust and narrow visioned criticism to make possible the continuance of the work of the community hospital. Let us glance for a moment at the manner in which this responsibility is produced and at the way by which it finds its resting place on the shoulders and consciences of the board members.

If the community hospital is an incorporated organization, as it should be, the members of the board of trustees as a matter of routine are elected annually by the members of the organization. Overlapping periods of service are usually found.

The members of the corporation are often required to pay a purely nominal annual fee, ranging from $5 to $10, which gives them the right of suffrage in the election of the hospital's trustees. The members of the corporation at their annual meeting receive the report of the trustees for the year, and then proceed to elect those persons whom they desire to represent the community as trustees for the coming year. The board may vary in number from a dozen to a score or two, thirty being a common number.

Of this group, the president, who is elected by the board at its first organization meeting, appoints such standing committees as the executive, finance, accounting, property, social service, medical, house, nursing and publicity committees.

Special Committee Manages Finances

The executive committee has power to act on urgent matters between the meetings of the board proper, which usually take place at least quarterly and sometimes monthly. The executive committee receives the recommendation of the finance committee as to the expenditures of hospital funds, and having approved this report, refers it to the board with its approval or disapproval.

The management of the finances of the small hospital is actually placed then in the hands of a special committee which cooperates with the executive committee. The superintendent of the hospital is responsible for the preparation of a budget, and for the adherence to it by those empowered to purchase supplies and other commodities. Well tried and clearly formulated business rules exist that can be applied to the purchasing and accounting angle of the hospital work. These yardsticks of business management are of the greatest use to those in charge of the hospital. To buy carefully, to disburse economically and to take stock frequently are but the basic practices of good business.

The chief difficulty arises, however, in ascertaining what is the extent of the community obligation from the standpoint of giving service to the sick. Who can tell how many dollars must be spent in order to meet the requirements that a twentieth century public expects and that modern medical science offers? What is the measure of proper hospital economy and when do necessary expenditures for the conduct of the hospital

merge into relative individual or community extravagances? These are but smatterings of the problems that daily disturb distraught board members who are facing accumulating deficits as each year's work draws to a close.

The efficient translation of the expenditure of money into adequate scientific hospital care is largely a relative matter, because of the absence of any standard by which to measure the adequacy of the latter service. Moreover, no one has as yet perfectly defined the term "due care of the sick". Nor is there any basis by which an isolated hospital may judge the amount of free work it should do and beyond which it should hesitate in the expenditure of community funds. Even to estimate roughly the necessary cost of restoring to usefulness a case of pneumonia or of removing successfully an offending appendix vermiformis is all but impossible, because of the existence of the human equation both in the case of the physician in charge and of the patient himself.

It has been repeatedly stated that the hospital is not responsible for the acts of its agents provided it has exercised due care in the selection of these persons. On the other hand, when the puzzled board of trustees wants to know whether it is spending too much money for the conduct of its hospital, there is no one to bring forth a proper yardstick by the application of which a definite answer can be given. Inefficient and careless surgeons add expense to the hospital and suffering to the patient when infections occur. Boards of trustees are at a loss to differentiate in these cases between unavoidable occurrences and those resulting from gross inefficiency or carelessness. It is only by a comparison of the scientific results, the amount of work done as well as the receipts and expenditures of one hospital with that of a similar institution, that any useful information may be secured.

Superintendent Is Agent of the Board

The superintendent, who is the agent of the board of trustees, has under various systems of administration more or less authority in creating financial obligations for the hospital. On the other hand, the position of the superintendent should not be an isolated one. He should certainly be an ex-officio member of the board of trustees and a voting member of the executive committee so that he may be able to furnish information and advice about the finances and policies of the institution.

It may be stated from the very start, therefore, that while there are certain standards that have been laid down as a result of the experience of hospitals generally in regard to the amount of money a day that should be spent in caring for each sick man or woman, there are no definite criteria by which a hospital may govern its work that will delineate definitely the extent of the obligation any hospital owes to its community. There are, however, some practical considerations that should be useful in the search for a solution of the financial problems daily confronting the hospital administrator. "Poor Richard" said that a penny saved is a penny earned. This tried but trite observation is daily applicable to the work of the small hospital which needs to earn every penny possible.

Functioning Along Budgetary Lines

No institution of any size should function without an attempt to conduct its work definitely along budgetary lines. To some hospital administrators, particularly in the smaller institution, the word "budget" is anathema. Some executives flatly say that it is impossible to tell how much money will be required to conduct the work of their institution, and that to prepare a budget represents a waste of time. Behind this assertion there is often a certain habit of slothfulness, of inaccuracy and indirection that is reflected many times in various guises about the hospital. Indeed, there are perhaps more small hospitals endeavoring to carry on their work without being guided by a properly prepared budget than there are those that have adopted this principle.

After all, a budget is simply an orderly setting down of probable receipts and estimated expenditures necessary for an annual period, and an implied promise to adhere insofar as is humanly possible to the itemized amounts it contains. It is a financial foot rule for the conduct of the institution. At times experience demonstrates that such estimates are inaccurate but this is no real reason why the attempt should not be made. Each year of the institution's life should make its budget more accurate. Moreover, the focusing of the attention upon possible small savings is certainly favored by institutional and administrative budgeting.

If new work is being planned or if costly replacements are likely to be necessary, the amount of money to be required must be stated with greater accuracy if the expense for the hospital's work as a whole is being prognosticated. The business of building a budget is a difficult and at the same time a serious one.

In the small hospital where departmental heads are not necessary, often the chief architect of the budget must be the superintendent. To be sure, he or she may call together those whose respon-

sibility it will be to spend money in conducting any hospital division in order to secure from them the concrete results and recommendations of their experience for the year just finished. It is a good scheme for the superintendent to impress the dietitian, the housekeeper and the head of the nursing department, with the fact that they, too, play an important part in prognosticating the financial needs for the coming year, and that the success or the failure of the budget will depend more or less upon them as individuals. In this conference, it may be emphatically stated that the superintendent does not expect to be informed as the end of the fiscal year approaches that it has been necessary to exceed budgetary amounts for the carrying on of any activity. Every institutional executive has experienced the disquieting day of reckoning when he thus learns that a sizable deficit has been accumulated without his knowledge or indeed his acquiescence for the creation of such financial obligations.

Experience of Other Hospitals Should Help

Perhaps the frequent turnover in the position of hospital superintendent might be lessened, were the superintendent never required to take to his board the disturbing information that it must repeatedly appeal to the community for more money to meet accumulated hospital deficits. This circumstance sometimes actually forces upon the board of trustees a major decision as to whether a community that has not supported its hospital in a financial way actually desires or needs a continuance of this effort.

In a new institution, a budget presents many difficulties. No policies having as yet been laid down, because of a lack of experience as to the support that will be forthcoming from the community, the budget more than ever is but a crude estimate of expense and income. The size of the medical need not having been ascertained, the growth of the hospital for the coming twelve months is but a mere matter of conjecture. But all these difficulties are but a challenge and certainly should not prevent a budgetary attempt. The experience of other similar hospitals should in this circumstance be valuable.

The itemization of the small hospital's budget generally should include, under separate headings, funds for salaries, for supplies, for new and replaced equipment, as well as money for supplies, for repairs, for the upkeep of grounds and similar expenses. The utmost frankness should prevail between the administrator and his subordinates in arriving at these estimates. At the conclusion of this conference, there should be no cutting or diminution of amounts without consulting the department head concerned. Budgeting should be a cooperative affair.

After the estimates covering the probable needs of the hospital for the coming year have been placed on paper, this document should be forwarded to the finance committee with an estimated statement of the income of the hospital for the succeeding twelve months.

The superintendent should request to be allowed to discuss the budget, item by item, with the finance committee. If this committee approves the income and expenditure estimates, it must understand definitely that it shares the responsibility of defending the accuracy of these statements. By this action, it practically promises to do all within its power to maintain the estimated income at the figure stated, and the superintendent definitely obligates himself to cut his administrative garment from the financial cloth the board furnishes him.

After the budget is approved by the finance committee, it is forwarded to the board of trustees and receives the final, official approval of that group. The superintendent is then directed to administer the budget as prepared, and it is here that the efficiency and forethought of the superintendent or their absence, are shown. If he has been fearful and hesitant in honestly stating his opinion as to the amount of money required, he will soon suffer the ill effects of this lack of wisdom.

Most administrators hold weekly financial conferences with their subordinates. Others feel that monthly meetings are sufficient.

A Comparative Study by Periods

To require that no more than one-twelfth of the annual budget be spent monthly is a wise policy. This may not always be possible when supplies are purchased in quantity, but a proportionate amount of the total expenditures can be charged to each month. This monthly check-up is the basis upon which all budgets are successfully operated. As the months pass, a comparative study by periods may be made. For example, more money will be spent for coal during the winter months, and less for ice, or the reverse. During certain periods of the year, the price of certain food commodities will be higher than at others. A comparative study by months, and by periods of several months, will serve to strike an average covering these expenditures.

The crux of the whole situation, from the standpoint of the hospital, is a comparison of its income with its expenditures. Insofar as the income of this type of institution is concerned,

there are many factors to be considered. While many of these statements may relate to larger institutions, yet in smaller communities where those of moderate means are chiefly served, there are sources of income that are here conspicuous by both their presence and their absence when compared with the urban hospital.

Past experience in regard to the percentage of bed occupancy is of much importance. If every bed were occupied every day in the year, it would be simple for the superintendent to multiply the number of beds by the price paid by the days of the year, to secure the total income from that activity. If it has been found in a semiprivate medical ward of four beds, that two of them will be occupied every day in the year, it is just as simple to foretell the income from that group. This figure may vary because it depends upon such extraneous factors as business depression, epidemics, changes in the medical staff or in the hospital administrator. Despite these factors, however, it will be possible to strike a more or less steady income average. Taken group by group, then, the administrator may roughly compute the income from his hospital in this manner.

Ratios Vary According to Locality

If a flat system of charges is in effect, by which the room fee includes also all laboratory, x-ray and other expenses, the computation of the income from any hospital bed group is simplified. If on the other hand, a system of special charges prevails, it becomes necessary for the administrator to estimate the amount of income he may expect to receive from these activities. It has been stated that from fifty to sixty laboratory examinations per 100 beds per day and 1,200 patient days per 1,000 population, may be expected. It is freely acknowledged, however, that these ratios vary greatly in many locations.

A consideration of the sources of income and items of expenditure of the small hospital should include a more or less detailed discussion of institutional policies, affecting both of these major subjects. The adoption of the community chest policy has become rather general throughout small and large communities. While there are many benefits from the standpoint of the hospital in subscribing to such a plan, there are some undoubted disadvantages. The institution is usually prohibited from presenting to the public, as an individual activity, an appeal for funds to meet unusual situations. At times, there is a strong trend toward the practice of paternalism on the part of the community chest organization. If the income from the community fund is ostensibly to meet the annual deficit, incurred as a result of the treatment of free patients, the hospital might well congratulate itself that such an arrangement has been made. If the community chest appropriation is inadequate for this purpose, then the institution must needs feel free to present its case to the citizens of the community in order to function as it should.

From the standpoint of the actual earnings of the small hospital, a carefully thought out system of charges must be inaugurated. It is customary in many institutions to charge $3 a day for the use of ward beds. Some hospitals charge more, some less, but these two classes it appears are in the minority. The franking of this charge should not be left in the hands of the medical social service worker unless no other arrangement can be made. An investigator who may be an attaché of the business office, appears to be a more suitable person. If $3 a day cannot be secured, a fraction of this amount should be accepted, if for no other reason than to prevent those who should pay something from voluntarily pauperizing themselves.

There seems to be no definite understanding as to what constitutes a day's service. It is customary for most institutions to charge a day's board when an actual admission to the hospital has been made, even though but a fraction of a day is actually spent therein. There is no standard agreement as to the number of hours that should constitute a day, this matter being left usually to the good judgment of the fiscal officers handling the account. When more than a day and less than two days have been spent in the institution, the same policy is frequently adopted. Most institutions under 100 beds operate on the room rate plus the extra charge system. It does not seem practicable to many administrators to adopt a flat rate that will cover laboratory, room and board services.

Special Departments a Source of Income

The hospital secures an income from the following special departments, these departments usually, though not always, showing a net profit: clinical and x-ray laboratories, operating and delivery rooms, ambulance and out-patient department. Funds are also derived from the board of special nurses, emergency room fees, the sale of old material, donation day and from voluntary contribution boxes. There has not been included in this list the income from corporate accounts which might represent interest on investments, major donations and income from endowments.

The operation of the clinical laboratory of the hospital often shows a net profit. On the other hand, a small hospital frequently has difficulty

in securing a competent laboratory director. This difficulty is often reflected in the financial showing of the department because of the necessity of paying an unusual price for the services of the director. Some institutions operate on a 50 per cent gross income basis; others pay the laboratory director a stated salary for two or three hours a day thrice weekly. Those hospitals that have been approved by certain national bodies are required to have a daily visit from the laboratory director.

Sometimes a flat rate is fixed covering all necessary laboratory service. This varies from $5 to $10 dollars a patient and includes as many of the routine clinical and seriological procedures as the physician deems necessary in the study of the individual case. In some institutions, this arrangement only applies to semiprivate and ward patients; in others, it is all-inclusive.

Scale of Charges for a Fifty-Bed Hospital

A scale of charges, operative in an institution of fifty beds, is given here. No standard can be laid down, because each community is more or less a law unto itself in this respect. It may be said, however, that the clinical laboratory should be at least self-supporting in private hospitals. It has been the experience of many institutions that a considerable profit is shown as a result of this work.

The charges for the operating room, including the services of the anesthetist, vary from $10 to $25. In one institution a rate of $15 for minor and $20 for major cases coming from private services is fixed. A fee of $5 and $10 respectively, is charged for patients coming from the wards.

The delivery room rate is usually somewhat lower, varying from $10 to $20. The charge for anesthesia is somewhat dependent upon the policy of the visiting obstetricians working in the hospital, although it appears to be customary for most physicians to administer an anesthetic during the third stage of labor at least. It may be added here that the hospital has a right to insist that physicians employ the services of the paid institutional anesthetist. An income from her services should be expected.

In the emergency room a flat rate of from $1.50 to $2.50 is usually charged for dressings, including medical treatment, and a routine charge of from fifty cents to $1 is made for redressings. This does not include the treatment of compensation cases, a special rate usually covering these services. As far as the dispensary is concerned, there appears to be no accepted system of charges. In some hospitals, irrespective of size, the original card is sold for twenty-five cents, this covering as many revisits as the patient desires or needs. In certain of the individual dispensaries conducted by the hospital a larger fee is frequently set. In the genito-urinary dispensary, this varies from fifty cents for irrigations and medicine for cases of specific urethritis, to $1 or $2 for the injection of arsphenamin.

A practical problem encountered here is the mixing of pay and free cases. It would appear a wise system, whenever possible, to conduct the pay clinic at a different hour from that of the free clinic. This prevents patients from comparing notes, and from becoming dissatisfied because of a different charge being made to several individuals covering what to them is the same service.

In the pay clinics, a charge of $1 for irrigations and medicine and of $2 for arsphenamin injections, is often made. In the free clinic no charge, or only a fractional fee, is exacted.

Medicines are often sold to private room patients at cost price, and in the dispensary sometimes not even the cost to the hospital is secured. It would appear to be fair for the hospital to refuse to dispense costly preparations in the dispensary, and to require physicians there to adhere to the usual United States Pharmacopœial drugs.

Charging for Ambulance Service

Most institutions make a charge for ambulance service, setting certain limits within which a flat rate is expected, and a per mile charge for cases outside this district. Institutions should expect to receive at least fifty cents a mile for the use of their ambulance. When depreciation and tire, gasoline and oil expenses are computed, no profit to the hospital will result at this rate.

The x-ray department in most hospitals is a source of considerable income. Here, again, the small hospital often experiences difficulty in securing a skilled director to carry on this work. In some communities, a trained but nonmedical man is secured to function in the absence of a visiting roentgenologist. The accompanying rate card is one that is used in a hospital of less than 100 beds.

It may be added in comment on this system that there is perhaps too much variation in the minimum and the maximum charges in some instances, and that certain definite regulations should be drawn up by which either the x-ray director or some hospital fiscal officer would be governed in setting the rate to be charged. For example, fluoroscopic examinations vary 100 per cent, gall bladder, 25 per cent, urinary tract, 20 per cent and colon injections, 25 per cent.

THE MODERN HOSPITAL has discussed on several

occasions the advisability of fixing the compensation of the x-ray director on a net or gross basis. There are certain considerations which make this rather a local decision, and, hence, no standard can be laid down in regard to this matter.

The superintendent perhaps has a greater control over the methods and amount of expenditure of money in conducting the hospital than he has in governing its income. The latter is largely affected by such factors as local institutional extent and nature of policies, and is perhaps more governed by matters over which the superintendent has no control than is the case in the disbursement of funds.

There can be no true control of purchases until there is some degree of standardization of supplies. In this statement there is much that concerns the economic functioning of the institution. To buy cheap surgical gloves to-day because funds are scarce, and to buy a more expensive article to-morrow because the reverse is true, is poor policy.

The superintendent of experience will be able to prepare specifications and samples covering most of the standard articles used by the hospital. This will often consist in the practical manifestation of a conviction that a certain named article is preferable to another, and the requisition will be made by name rather than by specification.

It is a shortsighted policy for the hospital to purchase in small quantities because money is not always available to pay promptly for the goods ordered. It would be economical for the board of trustees to borrow money for a short period of time, to purchase supplies in quantity and thus to secure a reduced unit price.

Not only should a standard article be selected and described, but a standard quantity, necessary for the conduct of the hospital over any given period, should be ascertained. If for example, three gross of catgut are needed to supply the operating room for three months, to buy a year's supply might save 10 per cent of the cost, which is sufficient for money to earn anywhere.

Hand to mouth buying is frequently a shortsighted policy self-evident to all. The purchase of supplies in as large quantities as possible is an economical practice.

The standardization of quality and quantity of supplies, therefore, is a basic consideration to which the superintendent must give his attention not only in preparing his annual budget but in steering his financial course throughout the whole year.

Once the quality and quantity of supplies for the hospital have been decided upon, then the manner and source of their purchase must be considered. It is not the feeling of the majority of executives that the hospital owes an obligation to local dealers, from the standpoint of purchasing supplies from them, unless they can compete in price with others. The obligation of the board of trustees is to secure, at the lowest possible expense, the greatest service to the community's sick.

Staples, including canned goods, potatoes and flour, may be secured on a quarterly or a six months' basis, a contract being entered into by the board of trustees, and delivery made as required. Even the small hospital should be able to do this. To purchase green goods from local markets as needed is often the policy of small institutions. It should be possible for such food products to be secured from local farmers.

It is surprising to learn the percentage of hospitals both large and small which fail to discount their bills. Sometimes this is brought about by an inordinate delay in checking the receipt of

RATES FOR RADIOGRAPHIC EXAMINATIONS

	Private	*Semiprivate*	*Clinic*
Finger, hand, wrist, forearm	$7 to $10	$5 to $7.50	$0.50 to $2
Toe, foot, ankle	7 to 10	5 to 7.50	.50 to 2
Shoulder, upper arm, elbow	12 to 15	9 to 11	.50 to 2
Thigh, hip, knee, leg (tibia or fibula)	12 to 15	9 to 11	.50 to 2
Head, sinuses, mastoid	14 to 20	10 to 15	2 to 5
Chest, heart, lungs	14 to 20	10 to 15	2 to 5
Spine, neck, pelvis	14 to 20	10 to 15	2 to 5
Esophagus	15 to 20	11 to 15	3 to 5
Stomach, duodenum, appendix, abdominal tumor, pregnancy	40 to 50	30 to 38	10 to 15
Colon injection	15 to 20	11 to 15	3 to 5
Teeth: Full set	10	7.50	3 to 5
Half set	5	3.75	2 to 3
Single film	2	1.50	.50
Urinary tract, kidney, ureters, bladder	16 to 20	12 to 15	2 to 5
Gall bladder, including tetraiodo test	15 to 20	11 to 15	2 to 5
Fluoroscopic examination according to region	5 to 10	3.75 to 7.50	1 to 2
Treatment, according to region and time required	10 to 20	7.50 to 15	2 to 5

For stereoscopic radiographs add $5.

All rates for semiprivate patients in the hospital will be 25 per cent reduction from the rates charged for private patients.

goods and in preparing the vouchers. Just as often it occurs because either the superintendent is slothful in business methods and hence does not take advantage of the usual 1 to 2 per cent discount for cash, or just as frequently, funds are not in hand with which to settle promptly bills for supplies, food and other hospital necessities.

What has been said in regard to securing funds to purchase goods in larger amounts, may also be said relative to the discounting of the institutional bills. It would be economical to borrow money for a short period of time, in order to secure these discounts. The policy of prompt settlement of indebtedness is one that, in a measure, raises the financial morale of the hospital.

In regard to methods of buying, in some localities it has been found advantageous for a number of hospitals to pool their interests and to secure bids on staple articles at a quantity price, each institution satisfying its needs from the quantity covered under the contract. If this is not possible in certain metropolitan areas, there exists a purchasing bureau with a hospital membership, which not only includes urban institutions, but also those which are located some distance away, with an annual membership fee which varies according to the size of the hospital and the amount of its purchases. Hospitals even at a distance may take advantage of the quantity price secured as a result of this bulk buying. Boards of trustees of small hospitals should seriously consider the financial advisability of becoming members of ethical and well conducted purchasing bureaus.

Standardizing Supplies

From the standpoint of food purchasing, fresh meat, butter, eggs, bacon and smoked meats, together with green goods, comprise more than 50 per cent of food purchases. It would be folly to buy meats from the local market from day to day as needed, even though the dealer proclaims that he is giving the hospital wholesale or near wholesale prices. At one institution in which the food products amounted to about 25 per cent of the total money spent to conduct the hospital, meat was bought locally and milk and cream were purchased as needed, month by month. What appeared to be a rather exorbitant rate was being paid for unit quantities of these commodities. It was found to be to the advantage of the hospital to secure bids for milk and butter in amounts necessary for a quarter, and to purchase meats by the side, although it was necessary to enlarge ice box space to do it. A contract covering a six months' need of some of these staples, to be delivered as required, usually saves money for the institution.

The test of buying and preparing food properly lies in the inspection of the garbage pail, a fact which no astute dietitian will overlook. The careful superintendent will not only budget his institution as to major expenditures, but he will also stipulate a maximum amount per meal which may be spent by the dietitian in the purchase of raw food.

What has been said in regard to the standardization of the quantity and quality of various stipulated articles applies to all those commodities required by the hospital. If every member of the hospital personnel could be brought to understand that the same economy must be exercised in the use of the hospital's property and supplies as would be exercised in the handling of his or her own personnal possessions, the superintendent's financial worries would in a large measure be lifted.

How to Keep an Accurate Operation Index

Cooperation between the surgery and the records room is the surest means of keeping an accurate and complete operation index, according to Dr. T. R. Ponton in the *Western Hospital and Nurses' Review*. The actual making of the index is simple; it is the securing of the information necessary to accuracy that requires careful attention.

The records librarian should go directly to the supervisor of the operating room for her information. The supervisor may state only the operation itself, leaving it to the librarian to subdivide as far as is desirable by using diagnosis and region. Reference to records is simple in a small hospital if all appendectomies are indexed together. In a large hospital, it is necessary to subdivide —to index Appendectomy—Acute Catarrhal Appendicitis, Appendectomy—Acute Gangrenous Appendicitis, Appendectomy, Chronic Appendicitis, etc.

Weeding Out Unsatisfactory Clinical Laboratories

In an attempt to weed out many clinical laboratories that are operating in New York on a factory basis and where work is done by persons who have insufficient training and experience, the city department of health has made an amendment to the sanitary code, according to the *Journal of the American Medical Association*. The amendment reads as follows:

"No person shall display, or advertise or hold out to the public that diagnostic laboratory facilities are furnished therein unless the name and location of the laboratory performing the tests and examinations are clearly indicated on such sign." Another provision of the sanitary code is that no person shall conduct a laboratory unless he has a permit from the board of health, has had three or more years of general laboratory training and has received an M.D., A.B., B.S., Ph.D., or Phar.D. degree.

Editorials

Meeting the Need of the Middle Class Patient

THE recent tendency to provide special buildings and facilities for the care of persons of moderate means has raised the question in the minds of some hospital authorities as to whether the building of new units for this particular group of patients is sound policy.

It is generally said that modern medical services are available for the rich and for the poor, but not for persons of moderate means, who make up more than three-quarters of the population. It must be borne in mind that this large group of the population of the country is a recent development, and represents a shift in our economic organization and the elevation of the wage earning groups to economic semi-independence. Should not the provisions for hospital care of this group be progressively adjusted to meet the newer needs of those who formerly were charity patients in public wards or who possibly were unwilling to go to a hospital because only ward facilities were provided?

No one questions for a moment that often serious illness and hospital care seriously disrupt the economic well-being of a family and that occasionally physicians contribute to this condition by unreasonable charges and possibly by commercial methods. But does the hospital problem require the development of new units for persons of moderate means, intermediate between the public wards and the expensive private pavilion? It is common experience in the hospital to find that patients of moderate means desire the same expensive facilities as the wealthy. To the extent that these facilities are essential for proper diagnosis and treatment they undoubtedly should have them. But not infrequently this tendency goes much further and is another evidence of the philosophy that every person is entitled to the best and that every luxury should be available to everyone. This is not limited to the hospital field where, as a matter of fact, it is not as pronounced as elsewhere. A glance at the staggering expenditures made every year for automobiles, radios, tobacco, candy and similar luxuries, largely accounted for by persons of moderate means, makes one wonder if the financial aspects of the hospital problem may not be exaggerated.

Is not the solution of the problem an elaboration upward of what we consider to be the best provisions for ward care? Should not the facilities for the person of moderate means be elaborated from below upward, as far as the economic grouping of the hospital patients are concerned, rather than downward from what the private pavilion provides? Small wards with numerous single and double rooms, such as are now popular in hospitals, permit proper segregation of patients and provide at the same time the most economical type of administration, and hence make possible reasonable costs for care. Surely this arrangement comes near to being the solution of this problem.

Before adding more costly new units to existing hospitals or building new hospitals for this particular group of patients, involving large capital expenditures and promising heavy maintenance costs, should not this problem be closely scrutinized from the standpoint of its historical evolution?

Looking in the Mirror

NARCISSUS, the son of Cephissus, was the embodiment of self-conceit. He spent his time wooing his reflection in the clear waters that traversed his mythical homeland.

But a reflecting surface may serve other purposes than providing an incentive to personal vanity. It may reveal personal as well as physical defects, both humiliating and stimulating. It may reveal the deadly sins of complacency, self-satisfaction and professional inanition. Some, with blunt tongues, might employ the somewhat plebeian but descriptive term, laziness, as fully comprising all the above traits.

The superintendent ought often to look at himself carefully and critically. In so doing, he may find in his professional image some explanation of the much discussed rapid turnover experienced by members of his profession. He may be able to understand more fully the inadequacies in monetary recompense, of which he has complained to colleagues. Let him ask his image when last he attended a convocation of hospital executives. Or why the hospital literature has contained nothing from his pen for many months, or even years. And in reply, he may hear the voice of his image inquiring why his presence is not more often desired at community councils on welfare matters, or why he is not more frequently quoted in the local press on health and hospital subjects.

Does he see, mirrored by the mercury on the glass, a mere holder of a job, to whom the days of the month drag endlessly on toward that day on which money is passed into his hands? Or, does he see there one who is doing his part to ele-

vate the ofttimes dreary duties of the administrator to the level of scientific service to the sick?

There are those who affirm that there are some of Narcissian fiber in the hospital field, to whom the virtues of professional and personal discontent are often strangers. What a becoming trait is humility in the presence of man's ignorance of the mysteries of life and death!

When the millennium of complete knowledge, relative to the treatment of disease, is realized, and hospitals approach perfection in their methods of administration, then and then only may mere man preen his professional feathers in self-admiration.

Winning the Employees' Support

UNDOUBTEDLY the greatest task confronting every hospital superintendent in this country is keeping constantly before himself and before every one connected with his institution the great fundamental fact that hospitals and all hospital activities have only one object—the care of the sick.

Sometimes midst the jealousies and animosities that exist between staff members, board members and superintendents the best interests of the patient are lost sight of and the hospital becomes a convenient stepping stone for the selfish ambition of the unscrupulous.

It is not easy to impress upon the horde of employees who never come in contact with a patient that upon their work depends largely the comfort and welfare of the patient. It too often happens that the work of the laundryman, the electrician, the plumber or the carpenter is regarded as just so many hours' work done for a monetary consideration, rather than as an important contribution to the greatest cause known to man.

There are two ways by which the goal can be reached. First, by the devotion of the superintendent to his work. Be his influence good, bad or indifferent it will be reflected in the attitude of the employees clear down through the organization. The other means of inspiring employees is the holding of conferences, at which the employees should be consulted, encouraged and complimented on their importance to the organization. Of course the most lasting impression the patient carries away with him is that of the nursing service, be it good or bad.

When institutions have succeeded in impressing upon all employees the importance of their work and have inspired them with a desire to do everything possible at all times and under all conditions for the comfort and welfare of the patients, financial difficulties will disappear.

A Practice That Undermines Hospital Morale

ALMOST every beneficent law brings in its train some evil. When the federal government and the various states enacted compensation laws, no one realized that these would result in the creation of a horde of litigation fomenters.

These lawyers' touts are the bane of the hospitaler's life. They constantly attempt the undermining of hospital morale; they grind the hospital between the ambulance chaser and the claim agent; they deluge the institution with requests for copies of records, requests that sometimes have the backing of the court; they hale hospital officials before judges to attest the authenticity of records, and they tend to prolong residence in hospitals in order that damages may be augmented. The whole practice is subversive of public welfare.

The legal profession is attempting to correct the situation by disciplining infractors of its code of ethics. Bar associations, medical societies and many other organizations have united in an attempt to eradicate these evils. This is a movement in which hospitals should take an important part and to which they should give heartiest cooperation. They should close their doors to the physician who works with the shyster lawyer. They should guard their clinical records closely and reveal their contents only upon the order of a court of competent jurisdiction. Above all, the hospital must avoid even the appearance of complicity in what resembles closely legalized blackmailing and banditry and should ruthlessly get rid of personnel who join in this pillage upon society.

A Neglected Obligation

THE small hospital superintendent who critically examines a program ostensibly planned to benefit the executives of hospitals under 100 beds, must feel little urge to spend time and money in order to be present. Usually, the speakers represent large urban hospitals with complicated and expensive organizations. The difficulties confronting such administrators are very real, but are remote from those affecting the superintendent of a small suburban or rural hospital. It is generally known that a large percentage (almost three quarters) of the nation's institutions possess less than 100 beds, yet hospital literature and national organizations are not doing their share in lifting the burden of these often struggling hospitals.

To be sure, the Duke Foundation has published

a very commendable little volume on the proper planning of small hospitals, but to administer a small institution, inadequately staffed and equipped, is as difficult as to construct it.

The duties of the anesthetist in an institution of 500 beds, for example, consist of administering ether and similar narcosis producing drugs. In the small hospital, however, this may be but a relatively small part of her labor. How much should this type of worker be paid as compared with the recompense of the former? What is the best combination of duties for the housekeeper, dietitian, laundryman? To advise a small hospital to adopt a policy perfectly proper for a larger institution may be financially as futile and foolish as a suggestion that an ailing pauper would be benefited by a winter in Florida. A job analysis for hospitals under 100 beds would be useful to the group who function in the small hospital field.

Talking It Over

THE Sabines had an annual feast of purification which they called *"Februa."* The day was dedicated to St. Valentine, when timid lovers exchange sentimental effusions, and it occurred about the middle of the short month that afterwards became February. To the American, this is the month of Washington, our patriot ancestor and Lincoln, our nation's savior. The one an aristocrat and possessor of wealth, the other, a product of the soil, a relatively poor man. Alike, yet unalike, these two occupy first rank in the pantheon of our national heroes. At base, both men were modest and without great personal ambition, both were intellectually honest, both were possessed of tremendous fortitude and pertinacity. Rudyard Kipling's "If" was written about Washington; it might quite appropriately have been written about the gaunt, sad man who guided his own soul and the destinies of this nation through the terrible days of civil strife. Heroes now, these men were not popular in their day. The situations they met were so complex, so involved, that they befogged the judgment of their contemporaries. Time's solvent has washed away the nonessentials and made visible the framework of their greatness.

* * *

TO THOSE who follow medicine in its various branches there is an added significance to this month in the birthday of John Hunter, St. Valentine's Day, two hundred years ago. A Scotch farmer's son, disliking school, yet a student of the life of the fields, an apprentice to a timber merchant and cabinetmaker, Hunter finally became, at the age of twenty years, a student in his brother William's anatomical school in London. An assiduous dissector, he developed into the greatest comparative anatomist the world has ever known. Always a delicate man, he nevertheless took part in the Seven Years' War, at the completion of which he set up as a teacher of anatomy and a practitioner of surgery. Among his students was Edward Jenner who was to give to the world the priceless boon of vaccination. Possessed of an insatiable curiosity, he made a wonderful zoological collection of both living and dead mammals, birds, reptiles and fishes, and he was indefatigable in studying their habits, health and diseases. How toads breed, how cuckoos nest, the habits of hedgehogs, bats, salmon, porpoise, all occupied his mind and he added enormously to our knowledge of anatomy, zoology, physiology and surgery.

* * *

THEY certainly did some things better in the old days. In 1802, the British Parliament voted Jenner 10,000 pounds sterling for having developed and made public the benefits of vaccination. This is a considerable sum even now; it was much more a century and a quarter ago. Parliament, however, was not satisfied and in 1807 made a second grant of 20,000 pounds sterling. How many rewards has the Congress of the United States ever given to medical men for their work? Our nation is not alone, however, in its lack of appreciation of its great men of medicine. Only the other day, Ronald Ross, the discoverer of the mosquito transmission of malaria, was obliged to sell his private papers in order to provide a competence for his declining years. In poor health, seventy years of age, he was thus forced to acknowledge his poverty publicly. Had he been a warrior, he would have been made a belted earl and granted a handsome sum of money, but since his contribution to posterity is merely the prevention of disease and premature death, his reward is penury.

* * *

A HIGHLAND village, so runs the tale, was to give a banquet to a returning hero who had blazoned Scotland's name on the world's scroll. To provide a feast of reason and a flow of soul, each villager agreed to pour a bottle of wine into a cask provided for the purpose. One cannily poured in a bottle of water, thinking no one would discover the substitution but when the cask was broached, it was found to contain nothing but water; all had practiced the same deceit. It is even so in institutions. When one employee discovers that he can substitute the water of slack service for the wine of honest industry, it isn't long until the output of the whole force gets pretty thin and all the world learns of the deceit.

* * *

BISTOURY is derived from the Old French, *bistorie*, meaning a dagger, and scalpel from the Latin, *scalpere*, to cut. Forceps were originally a blacksmith's tool and the word is from the Latin, *formus*, hot, and *capere*, to take.

* * *

THE thirty-centime stamp issued by the French government bears the head of Pasteur. The rugged face is shown in profile and thus France honors one of her most illustrious sons and one of the greatest scientists of all time. That nation does such things well. It names streets and plazas after Frenchmen who have added to the world's knowledge—men who have brought benefits to mankind. In the United States, we have made a beginning in this direction, we have named a few schools after celebrated physicians and beloved surgeons, but in a big way we yet have to recognize our great men of science in this manner. Warriors and statesmen find a place in our national pantheon as represented by our postage stamps, but the noble men and women of the healing art are still unrecognized. Why doesn't somebody start a movement to put Benjamin Rush in the world's stamp album?

YOUR EVERYDAY PROBLEMS

A department devoted to the informal discussion of problems arising in the everyday life of the hospital superintendent.

[No attempt has been made to offer final conclusions relative to the questions considered in this department. THE MODERN HOSPITAL will gladly welcome further comment by its readers on any of these problems, or the presentation of other queries for discussion in later issues. —Editor.]

How Can the Hospital Speed Up the Treatment of Patients?

To some hospital administrators this question may seem a curious one. Some executives believe that the average patient's hospital stay is already too brief and that if each bed serves two patients a month this is the ultimate from the standpoint of the patient's welfare and of the reputation of the hospital.

On the other hand, it cannot be gainsaid that often too much time is lost in initiating the various steps necessary for an accurate diagnosis and efficient treatment. Too often patients are allowed to wait from twelve to twenty-four hours after admission before any active effort is made to begin the study of their cases. Some institutions have set forth in their rule books minimum laboratory procedures that are to be instituted at once upon the admission of a patient. Routine studies are enumerated covering the various types of disease most commonly seen.

For example, a patient with symptoms of cardiorenal disease would immediately be studied from the standpoint of nitrogen retention, a blood chemistry being done at once. A urinalysis, the determination of the carbon dioxid tension in respired air, and in some instances, a full blood count are also included in this list. In all surgical conditions with acute abdominal signs, a full blood count, a urinalysis and a blood pressure reading are required as a matter of routine.

Such studies can be rather easily enumerated, and the resident physician is instructed to learn the results of these studies even before his chief has seen the case. If such an understanding does not exist the patient is likely to lose a whole day's time, and the hospital bed to be occupied a proportionately longer period than is necessary.

The visiting physician rightfully is not willing to initiate treatment actively until his suspicion as to the nature of the ailment has been confirmed by laboratory work.

Again, much time is lost because x-ray examinations, electrocardiographic studies, basal metabolism estimations and other similar steps are delayed for one reason or another. Sometimes the physician in charge of these laboratories has irregular hours of attendance at the institution, and the patient must therefore await the arrival of the next succeeding period at which the aid of that particular laboratory is available. Interns sometimes delay to make out the proper requisition forms for laboratory studies. Nurses allow specimens of urine to deteriorate. Patients are accidentally or carelessly permitted to take meals when studies, before which food is prohibited, are to be made. Sometimes a rule exists that x-ray studies will not be performed unless the patient's history is properly written. When such an omission occurs the patient suffers as a result of the intern's lack of observance of this justifiable rule.

Patients are sometimes admitted for study and treatment on weekends when nothing will be done for several days. A case for tonsillectomy admitted Saturday afternoon usually is not operated upon until Monday or Tuesday, and while the hospital bed may not be urgently needed during this time, the patient is required to pay board and to be absent from his family and perhaps from his employment.

A mistake on the part of resident officers in regard to the scheduling of an operation or the proper preparation of the patient frequently delays the carrying out of this step for one or more days. As a result the patient's anxiety is unnecessarily prolonged and he is unjustly required to pay extra board through no fault of his own.

The patient may be ready for discharge, but because of the fact that the regular discharge hour has been allowed to pass without his final papers having been properly executed he is required to remain another day in the hospital.

It will be noted that most of these defects are traceable to carelessness, thoughtlessness or inefficiency on the part of the hospital's personnel. Many of them are preventable and because of this the injustice done to the patient is all the more regrettable. It is the duty of the hospital so to systematize its diagnostic, therapeutic and surgical procedures that the least possible time will be required for their execution, and hence the patient will be returned to his home and work as speedily as possible.

What Causes Linen to Appear Gray After a Supposedly Thorough Washing?

This question came to THE MODERN HOSPITAL from a hospital of 100 beds that is equipped with modern laundry machinery, but whose superintendent complains that the linens in her institution are not presentable even after a careful washing.

Various possibilities suggest themselves to explain the above situation. It should be ascertained that colored goods are not being placed in the same washer with bed linens. Sometimes careless employees fail to separate dyed articles from bed linens in sorting soiled laundry. To eliminate this possibility the work of the sorters should be carefully supervised.

Improper rinsing as well as the use of an inefficient washing formula will produce the same result. In one institution ordinary linen is subjected to washing in the

following mixture: 25 pounds of soap chips, 20 pounds of soda, 2 pounds of caustic soda in 100 gallons of water. Where linen is particularly stained, as for example that coming from the dermatologic, genito-urinary or pus surgical services, 17 pounds of caustic flake soda is added to the above mixture. An effective bleach is composed of 20 pounds of chloride of lime and 20 pounds of soda in 60 gallons of water. Where bluing is used, 1 pound of blue to 30 gallons of water is often used, and for starching, 10 ounces of starch are added to each gallon of water.

In regard to the technique of washing, there are certain possibilities that might explain the gray appearance of linens. Too early immersion of stained clothes in boiling water may serve to fix these stains. Many variations in the washing technique are used in hospital laundries but the following may be considered as a type.

After the clothes are placed in the washer, the machine is run for two minutes and a washing soda solution, 3 pounds to the 100 gallons, is used for removing stains. The water is then dropped from the washer. Cold water is used during this step. The washing formula already mentioned is next used with boiling water and the machine is run for fifteen minutes. If the clothing is greatly stained, the formula consisting of 17 pounds of caustic flake soda to 100 gallons is used. The above operation is then repeated for twenty minutes, and 6 ounces of the bleach solution to the 100 gallons of water is added. A ten-minute rinse with boiling water is then given, and this is followed by three five-minute rinsings with cold water.

If linen is to be starched, the starch formula is used for one minute after the last five-minute rinse.

The great temptation of laundry workers is to shorten the periods for washing and rinsing in order to complete the day's work more quickly. Each washer, which usually has its own motor, should be supplied with a clock, or there should be a timepiece plainly in view of those working in the washhouse. The laundry supervisor should make certain that the prescribed technique is accurately and faithfully followed.

In regard to the brands of soap and soda used, nationally known and advertised articles are usually reliable. The fault more often lies in the technique followed than in the supplies used, unless an unwise attempt has been made to save in purchase price at the expense of efficiency.

How May a Close Relationship With the Nonstaff Private Practitioner Be Maintained?

One function the hospital of to-day is developing intelligently is that of more and more offering its services in a diagnostic capacity. Nonstaff practitioners are encouraged in some localities to send their patients to various hospital clinics for study and diagnosis. At the conclusion of this period, the patient is returned to the private physician with a complete report of the hospital's findings.

Unethical physicians have been known to take advantage of this service. Charges have been made by the physician for services actually given by the hospital. This unfairness may be prevented in a measure by the institution's requiring a cost price fee for its service. The patient will not be likely uncomplainingly to pay twice for the service he knows he has received at the hands of the hospital.

The complaint some private physicians make in regard to the hospital's work is that once a patient has been referred to the institution, he never finds his way back to the physician who sent him. In some instances, this is a just complaint. The institution should be most meticulous in directing the patient to return to his own physician. A complete report of the hospital's contact with the patient should be promptly mailed to the physician referring him. Only in this way can the confidence of medical practitioners generally, in the fair dealing and scientific efforts of the hospital, be maintained.

The same practice should be followed in instances where operations are to be performed upon referred patients as well as in cases where unfortunately the patient has died in the hospital. Such an effort costs a relatively small amount and does much to build up the hospital's clientele, thus increasing its service to the community and its financial income as well.

Should Interns Collect Money for Executing Insurance Certificates?

In a certain eastern hospital, it formerly was the practice to permit the members of the intern staff to collect a fee for the execution of life insurance certificates. In this hospital, a minimum fee of one dollar and a maximum fee of five dollars were permitted. This institution is maintained by public tax levy. The administrator of this hospital was continually forced to justify this practice, relatives often protesting that the execution of insurance papers was as much a part of the hospital's care of the patient as the administration of drugs or the furnishing of foods. It was stated that if papers representing death claims were subject to fee, then birth certificates, weekly benefit papers and others should also be a source of income to the individual or to the hospital. Even when policies were for a very small amount of money, the regular fee was charged—a policy difficult to defend.

In the hospital to which reference has been made, it finally became necessary to discontinue the execution of life insurance certificates and to refer those desiring this service to another bureau in the city government by which a certified copy of death was issued. It was found that most insurance companies were satisfied with this document and that the cost to the relatives never exceeded fifty cents.

Hospital administrators in many parts of the country have been confronted with this difficult problem. In one institution, insurance papers are filled out in the main business office and no charge is made for this service. In another, a fee varying from fifty cents to one dollar is exacted, this money reverting to the hospital treasury.

It would appear that some arrangement whereby paid officials of the institution handle these papers is perhaps least likely to lead to misunderstanding and protests on the part of the public. The hospital cannot afford to be placed in a position where suspicion as to its motives and methods is generated in the minds of any one. Interns are notoriously impecunious. Sometimes because of the existence of an aggravated state of this condition, the young medical man is tempted to overcharge for this service. If it appears that the execution of insurance papers is not a part of the hospital's obligation to the patient and his relatives, then it would be better to include this service in the final hospital bill. It is risky and not usually practicable to place the decision as to which case should be franked and which should pay in the hands of young physicians untrained in the recognition of medical social problems. This statement may be said to apply both to the execution of death and weekly benefit papers.

How Can the Falling of Plaster From Sterilizer Room Ceilings Be Prevented?

The hospital superintendent who asked this question also included a query as to how damp basement walls can be treated. The average plaster employed in building operations deteriorates in the presence of moisture. Plaster of inferior quality, or that which is improperly applied, is particularly unsatisfactory in rooms where there is escaping steam or where dampness is present.

Sterilizers should, first of all, be properly hooded. This hood should extend a sufficient distance beyond the actual line of the sterilizer so that steam does not escape around its outer edges. The hood should be properly vented, and the flue leading to outside air should be devoid of sharp turns and should be of dimensions sufficient to secure adequate draft. Sometimes it is necessary to place a suction fan within this flue to secure good results. There are times when even this arrangement does not prevent walls from dripping with moisture during the process of sterilization. The proper installation of modern sterilizers usually includes the connection of exhaust lines to a flue within the wall or to the outside air. A useful valve has been devised that regulates steam ingress so that it does not intermittently escape from the safety valve.

There are various types of cement that may be applied to the walls of sterilizing rooms. Some hospital superintendents advocate the tiling of such rooms or even the use of marble slabs. Instrument and utensil sterilizers, from which steam escapes because of the faulty fitting of covers, should be overhauled to prevent damage to walls and ceilings by moisture.

Damp cellar walls may be traced to several causes. Sometimes, in the excavation for the construction of buildings of any sort a spring is encountered that is difficult to handle. Modern waterproofing should be employed on both the inside and outside walls. This, however, does not always solve the problem. In one instance, a superintendent found it necessary to dig a trench two feet wide on the outside of a laboratory wall and to place there what is known as a French drain. The water in this instance seemed to come from the eaves of the building, and after the above treatment had been given the dampness on the inside of these walls disappeared. This plan might be extended, if ground levels permit, to include a tile drain leading to lower ground, and connecting with the trench along the wall.

Local conditions so often affect the situation that no standard treatment can guarantee universal success. An ounce of ingenuity in solving such problems is often worth many pounds of more or less stereotyped advice.

Should the Hospital Charge for the Services of Pupil Nurses?

An instance recently arose in the hospital field in which, although graduate nurses were available, the superintendent saw fit to direct that pupil nurses care for private cases and that the hospital submit a bill of five dollars per day for such a service. This is rather an unusual situation. The hospital must never overlook the fact that in return for much drudgery, the young women in the school for nurses are due high grade educational facilities. Their ward and room activities must be supervised most carefully. While it is true that pupil nurses who are brought in contact with private room patients learn much as to the art of the practice of nursing, yet it is decidedly unfair for the hospital to sacrifice the educational needs of these young women in its zeal to realize financially upon their services.

It is rare that any institution is so pressed for nursing service that it will be necessary to substitute pupil nurse care for graduate nursing. It does not appear that this principle is sound. While at times the press of work may require that a pupil nurse be assigned to a certain type of case for a period of time longer than the curriculum designates, yet such a practice must be looked upon as a means of meeting an emergency, and not one justifiable as a routine procedure. It would not appear just either to the pupil or to the patient to refrain from engaging graduate nurses for private duty work when they are available. The hospital must not place itself in a position of profiteering on the services of these young women, nor must it assume the responsibility of withholding from private patients the services of more experienced nurses when such are procurable.

Is the Hospital Responsible for the Acts of Its Special Duty Graduate Nurses?

The superintendent of a Midwestern hospital, in asking this question, set down the following details: A maternity patient for whom a graduate nurse was caring had enjoyed an uneventful recovery during the first twelve days of her convalescence. On that day, the patient developed a fever accompanied by other signs of sepsis, and recovered only after a stormy three weeks' period of treatment in the hospital. The nurse in charge had recorded the temperature of this patient but once a day, although there was an order requiring that it be taken three times daily. The husband refused to pay the bill for his wife's treatment beyond that for the first twelve-day period. The superintendent of this institution felt that the hospital should be reimbursed for the full time during which this patient was in the institution.

Some adaptation of this problem, affecting not only the acts of nurses but others employed in the treatment of the sick, has arisen many times in the hospital field. In this instance it is not stated whether the local maternity routine required that the temperature of all patients be taken three times a day or whether a specific order existed on this particular chart. This detail does not affect the principle involved, however. It was the physician's responsibility to make certain that his orders were being carried out. No carelessness on the part of the hospital itself was demonstrated or even suggested in this case. The fact that the patient's temperature was normal each morning for twelve days and that no unfavorable clinical symptoms were observed during this time strongly suggests that the peritoneal infection in this case did not take place until almost a fortnight after delivery. The omission of the thrice-a-day temperature record was reprehensible, but in itself could have in no way caused the patient's difficulty.

It does not appear, in this instance, that the hospital should suffer financially because a careless nurse had been assigned to this patient. It is, of course, the duty of the hospital to make every effort to carry the names of none but competent nurses upon its registry. If proper facilities for the delivery of the patient had not been provided by the hospital, the institution might be held partly accountable for this unhappy occurrence. If the obstetrician could be proved negligent, it should be the hospital's duty to take the proper steps to prevent a recurrence of this accident. THE MODERN HOSPITAL believes that the superintendent of this institution would be justified in pressing for the full payment of this bill.

NEWS OF THE MONTH

Medical Education and Hospitals' Council to Meet February 18-20

MEDICAL men of note from all over the United States are to have part in the program of the annual congress on medical education, licensure and hospitals, American Medical Association, to be held at the Palmer House, Chicago, February 18, 19 and 20. The hospital and its part in the teaching and practice of medicine are scheduled for thorough discussion.

Hospital routine in the teaching of medicine will be discussed by Dr. Ralph H. Major, professor of medicine, University of Kansas School of Medicine, Kansas City, Kan., while Dr. Julius H. Hess, professor of pediatrics, University of Illinois College of Medicine, Chicago, will present the subject of the teaching of pediatrics in a modern hospital.

"The University Hospital, Community and the Practicing Physician," is the subject on which Dr. Henry S. Houghton, dean, State University of Iowa College of Medicine, Iowa City, is scheduled to speak. Dr. W. S. Rankin, director, hospital and orphan sections, Duke Endowment, Charlotte, N. C., will tell of the hospital section of the Duke Endowment and the medical school. Following these two papers, short discussions by representatives of several university hospitals will be given.

A part of the program is to be given over to a study of the hospital internship and the hospital staff conference. Dr. William Darrach, dean, Columbia University College of Physicians and Surgeons, New York City, will speak on the hospital internship, Dr. L. S. Schmitt, associate dean, University of California School of Medicine, San Francisco, on the routine duties of an intern, and Dr. Christopher G. Parnall, medical director, Rochester General Hospital, Rochester, N. Y., on a suggested program for the intern. A discussion by Dr. Wilmar M. Allen, pathologist, Hartford State Hospital, Hartford, Conn., on the hospital staff conference is scheduled as is also one by Dr. Bernard Steinberg, pathologist, Toledo Hospital, Toledo, Ohio, on autopsies and the hospital staff conference.

To Hold Hospital Service Conference

At the laboratory conference, Dr. William A. O'Brien, assistant professor of pathology, University of Minnesota Medical School, Minneapolis, is to speak on the hospital clinical laboratory, Dr. William C. Woodward, executive secretary, bureau of legal medicine, American Medical Association, on "Legal Status of Hospital Staffs," and Dr. Ralph Kinsella, professor of medicine, St. Louis University School of Medicine, St. Louis, on the subject of extended routine laboratory service in private hospitals. Dr. A. U. Desjardine, section of radium and x-ray therapy, Mayo Clinic, Rochester, Minn., will present a paper on "The Radiological Laboratory."

At the American conference on hospital service, a program dealing with industrial medicine will be given.

Speakers on medical education will include Dr. Ray Lyman Wilbur, president, Stanford University, California; Dr. Hans Zinsser, professor of bacteriology and immunology, Harvard University Medical School, Boston; David A. Robertson, assistant director, American Council on Education, Washington, D. C.; Dr. Dean Lewis, professor of surgery, Johns Hopkins University School of Medicine, Baltimore; Dr. Edward H. Hume, director, New York Post-Graduate Medical School and Hospital, New York City; Dr. Thomas Ordway, dean, Albany Medical School, Albany, N. Y.; Dr. Reginald Fitz, associate professor of medicine, Harvard University Medical School, Boston, and member, Council on Medical Education and Hospitals.

On the subject of state licensure the following speakers are scheduled: Dr. Walter L. Bierring, secretary, Federation of State Medical Boards, Des Moines, Iowa; Dr. Hugh Cabot, dean, University of Michigan Medical School, Ann Arbor; Dr. Ray Lyman Wilbur; Dr. Orrin Sage Wightman, chairman, Grievance Committee of New York State, New York City; Dr. P. T. Phillips, president, California Board of Medical Examiners, Santa Cruz; Dr. J. H. J. Upham, member, Ohio State Medical Board, Columbus and Harry Eugene Kelly, attorney, Chicago.

Pennsylvania Medical Schools Expand Hospital Facilities

In close association with the faculty committee headed by Dr. R. R. Huggins, dean, Pittsburgh University Medical School, Pittsburgh, preliminary plans for the central hospital structure of the new Pittsburgh Medical Center have been prepared by E. P. Mellon, architect. The central group will house the Presbyterian Hospital and the Eye and Ear Hospital and will contain approximately 750 beds. The Children's Hospital, already completed, and the Falk Memorial Clinic, presently to be constructed, share the Medical Center plot. In the immediate vicinity is the affiliated Magee Hospital. The Presbyterian and the Eye and Ear Hospitals will form parts of a main structure that will eventually include laboratories.

Upon the completion of the new medical-school building of the Jefferson Hospital, Philadelphia, the present college building is to be demolished to make way for a new ten-story building for the out-patient department, plans for which are being drawn by Horace Trumbauer, architect, under the direction of Dr. H. K. Mohler, medical director, Jefferson Medical College Hospital.

Dr. S. S. Goldwater is the consultant in the construction of both the Pittsburgh and Philadelphia institutions.

News of the Month

Comprehensive Program Is Planned for Illinois-Wisconsin Meeting

LEADING hospital administrators and workers from Wisconsin and Illinois will appear on the program of the joint meeting of the two states to be held in the Hotel Sherman, February 20 and 21. No phase of hospital work will be left untouched judging from the tentative program that has been planned by committees of the Hospital Association of the State of Illinois and the Wisconsin Hospital Association.

The first session of the two-day program will be held Wednesday morning, February 20, with Dr. J. W. Coon, president, Wisconsin Hospital Association, presiding. The invocation will be given by the chaplain of the Cook County Hospital, Chicago, followed by the welcome address by Dr. Arnold Kegel, health commissioner, Chicago. The response to Doctor Kegel will be given by Asa S. Bacon, president, Hospital Association of the State of Illinois.

Subjects Are Diversified

The first paper on the program is on the subject, "Why Both Large and Small Hospitals Should Do More Research," and will be presented by the Rev. Alphonse Schwitalla, president, Catholic Hospital Association. This is to be discussed by Dr. Robert C. Buerki, superintendent, University of Wisconsin Hospital, Madison. John A. McNamara, executive editor, THE MODERN HOSPITAL, is to speak on the subject, "Why Hospitals Should Cooperate With the Daily Newspapers," with discussions by Dr. E. T. Olsen, former superintendent, Englewood Hospital, Chicago, and Matthew O. Foley, managing editor, *Hospital Management*. This will be followed by a general discussion.

Asa S. Bacon, president, Illinois Association, will preside at the Wednesday afternoon session. The subject of the prevention of fire and explosion from anesthesia will be presented by Dr. Isabella Herb, anesthetist, Presbyterian Hospital, Chicago. A discussion from the Fire Underwriters' Laboratories, Chicago, will follow Doctor Herb's speech.

A symposium on "Nurses, Patients and Pocketbooks," the recent study prepared by the Committee on the Grading of Nursing Schools, promises to be an interesting feature of the program. Grace Crafts, superintendent, Madison General Hospital, Madison, Wis., is to talk on "Nurses," Dr. Ralph B. Seem, superintendent, Albert Merritt Billings Memorial Hospital, Chicago, on "Patients," and E. S. Gilmore, superintendent, Wesley Memorial Hospital, Chicago, on "Pocketbooks." Discussions by Dr. W. A. Henke, Grandview Hospital, La Crosse, Wis., and Amelia Dahlgren, Lutheran Hospital, Moline, Ill., will follow.

The annual banquet will be held at 6:30 o'clock, Wednesday evening, with E. S. Gilmore as toastmaster. On this occasion the delegates will be introduced to Mr. Bacon as president of the Hospital Association of the State of Illinois, to Dr. Coon as the president of the Wisconsin Hospital Association, to Dr. L. H. Burlingham as president of the American Hospital Association, to Dr. J. H. Bauernfeind as president of the Protestant Hospital Association and to the Rev. Alphonse Schwitalla as president of the Catholic Hospital Association. The Rev. John Timothy Stone, D.D., pastor, Fourth Presbyterian Church, Chicago, will speak on "Hospital Ideals," and Dr. L. H. Burlingham will speak on "The Superintendent."

Dr. Bert W. Caldwell, American Hospital Association, Dr. N. P. Colwell, American Medical Association, and Dr. E. W. Williamson, American College of Surgeons, will speak on the requirements for admission to their respective associations, at the Thursday morning session. Dr. Herman N. Bundesen, coroner, Cook County, Illinois, will speak on the coroner and the hospital, with discussions by the Rev. J. H. Bauernfeind and L. C. Austin, Mt. Sinai Hospital, Milwaukee.

A paper on improvement in hospital construction in the last five years will be presented by Carl A. Erikson, architect, Chicago, and this will be discussed by Dr. Robinson Bosworth, Rockford Municipal Tuberculosis Sanatorium, Rockford, Ill., and Dr. Herman Smith, Michael Reese Hospital, Chicago.

Business sessions will follow the luncheons of both associations.

Everyday Problems in the Hospital

The closing session will be devoted to a discussion of everyday problems in the hospital. Labor saving devices in the kitchen will be described by Owen T. Webber, Chicago, and discussed by Elizabeth Tuft, Wesley Memorial Hospital, Chicago, maintenance problems will be discussed by Thomas Kleyensteuber, Wesley Memorial Hospital, Chicago, and group nursing by Sister Stephanie, St. Joseph's Hospital, Chicago. Other papers will be given by J. Dewey Lutes, president, Chicago Cook County Hospital Association, on "Hospital Filing Systems," and William Stewart, Presbyterian Hospital, Chicago, on "Budgets for Hospitals."

New York Skin and Cancer Hospital Plans New Building

Preliminary plans for a new building of the New York Skin and Cancer Hospital, New York City, have been drawn by Crow, Lewis and Wick, architects, in association with Dr. S. S. Goldwater, consultant. The new building will accommodate a vast special clinic, together with about 250 in-patients. The building will face Central Park. It adjoins the Fifth Avenue Hospital and is in the immediate vicinity of Mt. Sinai Hospital and the New York Academy of Medicine. It will be thirteen stories above the ground, with basement and sub-basement.

News of the Month

Oklahoma, Kansas, Missouri Sections Make Up Midwest Program

The program for the Midwest Hospital Association meeting to be held at the Baltimore Hotel, Kansas City, Mo., February 22 and 23, has been divided into three sections, each of which is to be conducted by delegates from the hospitals of Oklahoma, Kansas and Missouri. Dr. B. A. Wilkes, superintendent, Missouri Baptist Hospital, St. Louis, and president of the association, will preside.

The program arranged by the Oklahoma section relates to the business side of the hospital. The Kansas program deals with the administrative side of the hospital and the Missouri program with the professional side. Dr. Bert W. Caldwell, secretary, American Hospital Association, Dr. F. C. English, secretary, American Protestant Hospital Association and the Rev. A. M. Schwitalla, president, Catholic Hospital Association, are to speak at the evening session on Friday. Matthew O. Foley, *Hospital Management*, Chicago, and John A. McNamara, executive editor, THE MODERN HOSPITAL, Chicago, will appear on the Saturday morning program. Their talks will deal chiefly with the subject of publicity for hospitals.

Questions with which speakers from the Midwest will deal have been set forth on the program as follows: What percentage of the hospital's total gross business should be charity? Do hospitals, not endowed, undertake more charity than their facilities should permit? Is it good hospital business to require bills to be paid weekly in advance? How much does the budget system actually help the hospitals? What can be done better to control visiting? Who should give out the condition of patients? Is the time ripe for many of our hospitals to close their training schools? Should the hospital have a salaried anesthetist and charge for his services? Are the hospitals graduating too many nurses? Should the staff have representation on the board? Should the superintendent sit in at all board meetings? How can the problem of case histories, physical examinations and other like work be met in hospitals in which no interns are employed? Is it practical to have flat rates for hospital service? What constitutes a complete case record in a small nonteaching hospital?

The election of officers and reports of committees will bring the two-day session to close.

Promise Completion of Veterans' Infirmary in Six Months

Construction was started about the end of November on the new $229,000 infirmary building at the United States Veterans' Hospital, Walla Walla, Wash., and according to the contractors, the building will be ready for occupancy in exactly six months. Heat will be used during the cold weather so that the pouring of concrete will not be hindered.

The building will be in the form of the letter "E," and will be of reinforced concrete with walls of brick and tile. The new structure, with facilities for treating 105 patients, will be so located that it will overlook the parade ground.

Two Philanthropic Groups Are Consolidated

In order to avoid overlapping in the work done, the Rockefeller Foundation and the Laura Spelman Rockefeller Memorial have been consolidated into a new philanthropic corporation. This corporation will be known as the Rockefeller Foundation and its net assets will total $264,602,447. The consolidation will insure greater unity and cooperation in carrying out the programs that have heretofore been administered under the two boards independently, according to Raymond B. Fosdick, chairman of a special committee on the readjustment of the relations of the various boards of the Rockefeller Foundation.

Coming Meetings

Alabama Hospital Association.
President, Dr. French Craddock, Sylacauga.
Secretary, Clara Wells, R.N., Eufaula.
Next meeting, Mobile, April 16, 1929.

American Hospital Association.
President, Dr. L. H. Burlingham, Barnes Hospital, St. Louis.
Secretary, Dr. B. W. Caldwell, 18 East Division Street, Chicago.
Next meeting, Atlantic City, June 17-21, 1929.

American Protestant Hospital Association.
President, Rev. J. H. Bauernfeind, Evangelical Deaconess Hospital, Chicago.
Secretary, Dr. Frank C. English, Hyde Park, Station O. Cincinnati.
Next meeting, Atlantic City, 14-17, 1929.

Annual Congress on Medical Education, Medical Lincensure and Hospitals.
Next meeting, Chicago, Feb. 18-20.

Hospital Association of the State of Illinois.
President, Asa S. Bacon, Presbyterian Hospital, Chicago.
Secretary, E. I. Erickson, Augustana Hospital, Chicago.
Next meeting, Chicago, Feb. 20-21, 1929.

Indiana Hospital Association.
President Albert G. Hahn, Deaconess Hospital, Evansville.
Secretary, Gladys Brandt, Cass County Hospital, Logansport.
Next meeting, Indianapolis, April 11-12, 1929.

International Council of Nurses.
Secretary, Christiane Reimann, 14 Quai des Eaux Vives, Geneva, Switzerland.
Next meeting, Montreal, Canada, July 8-13.

International Hospital Congress.
Next meeting, Atlantic City, N. J., June 13, 14, 15, 1929.

Midwest Hospital Association.
President, Dr. B. A. Wilkes, Missouri Baptist Sanitarium, St. Louis.
Secretary, Walter J. Grolton, Missouri Pacific Hospital, St. Louis.
Next meeting, Kansas City, Feb. 22-23.

Minnesota Hospital Association.
President, Dr. Donald C. Smelzer, Charles T. Miller Hospital, St. Paul.
Secretary, Joseph G. Norby, Fairview Hospital, Minneapolis.
Next meeting, Rochester, May 10-11, 1929.

National League of Nursing Education.
President, Elizabeth C. Burgess, Teachers College, Columbia University, New York City.
Secretary, Nina D. Gage, 370 Seventh Ave., New York City.
Next meeting, Atlantic City, N. J., June 17-21.

Hospital Association of Pennsylvania.
President, Dr. E. E. Shifferstine, State Hospital of Coaldale, Coaldale.
Secretary, H. E. Bishop, Robert Packer Hospital, Sayre.
Next meeting, Philadelphia, March 12, 13, 14, 1929.

Wisconsin Hospital Association.
President, Dr. J. W. Coon, River Pines Cottage Sanatorium, Stevens Point.
Secretary, L. C. Austin, Mt. Sinai Hospital, Milwaukee.
Next Meeting, With Hospital Association of the State of Illinois, Chicago, Feb. 20-21, 1929.

News of the Month

Flower Mission of Indianapolis to Build Hospital

The Flower Mission of Indianapolis, Ind., is now making plans to build a 100-bed hospital at a cost of $300,000. The new hospital will be built on city property west of the City Hospital and will be given to the city when it is completed. It is the intention of the Flower Mission to finance the new institution and pay the expenses after it is in use. Eventually it is presumed the city will take over the administrative expense.

The Flower Mission has done admirable service in taking care of advanced and incurable cases of tuberculosis that are not accepted at any general hospital. The mission is unique in devoting its attention to the class of cases that can be taken care of nowhere else, according to the *Indianapolis Medical Journal.*

The Flower Mission had its origin more than fifty years ago when a group of young women organized to take flowers to persons who were sick. Each week a carriage laden with flowers made the rounds of the homes of the sick. From this beginning grew the present successful social service agency.

Dietitians From Five States at Midwest Meeting

The second annual meeting of the Midwest dietitians, sponsored by the Chicago Dietetic Association, was held in Chicago, January 18 and 19. Approximately 150 representatives from Illinois, Indiana, Michigan, Wisconsin and Missouri attended each session.

The first meeting was held on Friday afternoon, January 18, at the Ida Noyes Theater, University of Chicago. Mrs. Esther Ackerson Fischer presided. Doctor Carlson, director, department of physiology, University of Chicago, spoke on "Recent Studies of the Hunger and Thirst Mechanism." Man seems to have no mechanism for becoming aware of his most vital needs, for instance, oxygen and certain minerals. It is believed that the violent contractions of an empty stomach give rise to the feeling of hunger, but it has been shown that the behavior of the stomach is as regular as that of the heart. In certain abnormal conditions, such as disease or fever, the contractions of the stomach do not cause hunger. They sometimes cause nausea instead. The sensation of hunger, therefore, must depend on a certain normal condition of the sensory nerves.

Thirst Theory Is Disproved

The most widely accepted theory in regard to the sensation of thirst is that it is caused by the drying of the mucous membrane of the mouth and throat, or the decrease of salivary secretion. Doctor Carlson feels that this theory is disproved because thirst often occurs before there is a dryness of the mucous membrane. Another theory is that thirst is caused by contraction of the esophagus, but it can be questioned as to whether this is a cause or a result. It has been shown that thirst can be wholly done away with for a time if the body is immersed in a tub of warm water, and that moderate thirst can be done away with by complete relaxation of the body.

Dr. Lydia Roberts, home economics department, University of Chicago, well known for her extensive work in nutrition, spoke on "The Dietitian and Normal Nutrition." Dietitians sometimes devote their time to abnormal nutrition to the neglect of nutrition for normal individuals, and in planning therapeutic diets they neglect to consider normal requirements. Nutrition workers are often too dogmatic in their ideas of diet, thinking only in terms of the conventional American diet. She demonstrated by charts that the simple and limited diets of other races and nationalities often more adequately fill physical requirements that does the average American diet.

Graduate Students Give Reports

Callie Mae Coons, graduate student, department of home economics, University of Chicago, gave a preliminary report on a study of "Calcium Retention in Pregnant Women." Mrs. Coons' study has extended over several years, during which time some of the same subjects have come under observation more than once. The women studied were on diets chosen and prepared by themselves with all foods and excreta weighed and analyzed. In four cases studied the women did not store excess calcium but even fell below the standards set by Schmitz. No conclusions have as yet been drawn from the unfinished study, but it is believed that such incomplete storage may have something to do with destruction of tooth structure and the inability of the mother to nurse her child.

Amalia Lautz, graduate student, home economics department, University of Chicago, gave a report of "Nutrition Work in Germany." She made a three months' study of nutrition of mothers and children in an institution to which the mothers came before their babies were born and where they remained until the children were of school age. The institution is maintained under the auspices of the German Red Cross. Miss Lautz felt that, although the ideas on nutrition held by directors of the Red Cross work were sound, the funds, staff and equipment were so inadequate that not a great deal could be done.

Following the meeting those who attended were guests at a tea given by the university in the reception rooms of Ida Noyes Hall. Later the group was invited to attend the regular organ recital in the new University Chapel.

The meeting in the evening was a dinner meeting held in the club rooms of the Medical and Dental Arts Building with Dr. Morris Fishbein, editor, *Journal of the American Medical Association,* as the principal speaker. Mrs. Fischer presided. Greetings were extended to the Midwest dietitians by Dr. Katherine Blunt, director, home economics department, University of Chicago, Ann Boller, president, American Dietetic Association and Miss Winkleman, director, home economics department, Lewis Institute. Doctor Fishbein's topic was "Food Fads and Fallacies." He made an exposé of current food fads, giving facts, names and figures. The beliefs and teachings of leading faddists were held up to scientific scrutiny with Doctor Fishbein's characteristic humor.

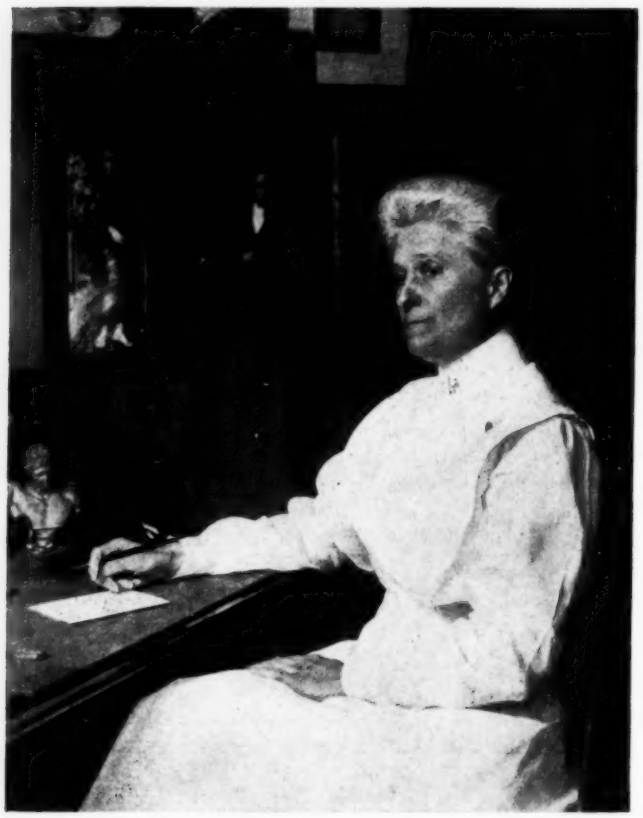
(Continued on page 128)

News of the Month

Nursing Pioneer Buried With Other Heroic Dead in Arlington

WITH the death of Anna Caroline Maxwell on January 2, the nursing profession loses one of its great pioneer leaders, one who made a conspicuous contribution to the advancement of the nursing profession not only in America but throughout the world. Because of her services to her country during both the Spanish-American and the World Wars, Miss Maxwell was buried with military honors in Arlington Cemetery, Virginia, along with other heroic war dead.

On December 15, a few weeks prior to her death, in



a simple bedside ceremony she was decorated with the Medaille d'Hygiene Publique by the French government. With the gold medal was presented a hand-illuminated parchment setting forth the citation of the French government. The nurses' home at the Columbia-Presbyterian Medical Center is the Anna C. Maxwell Hall, so named in honor of Miss Maxwell who was the founder of the Presbyterian Hospital School of Nursing and who served as its director from 1891 to 1921 when she retired.

Anna Caroline Maxwell was born in Bristol, N. Y., in 1851. Her education was carried on at home under tutors, with, later, two years at a boarding school. She received her nurse training under Linda Richards, known as the first American nurse, who was then in charge of the Boston City Hospital Training School. After her graduation, Miss Maxwell was called to establish a training school at the Montreal General Hospital. Upon leaving there she went to England where she inspected hospitals, and upon her return to America she was given charge of the training school that was connected with the Massachusetts General Hospital. In 1889, after eight years at the Massachusetts General, she was called to complete the organization of the training school of St. Luke's Hospital where she carried on the work successfully until 1891.

At this time she was offered the appointment to establish a school of nursing at the Presbyterian Hospital, New York City. The school was established on broad lines and the high educational standard that was set up then has always been maintained.

During the Spanish-American War, in the summer of 1898, a typhoid epidemic broke out at Camp Thomas at Chickamauga Park, Georgia, where 50,000 men were being trained. Miss Maxwell was given leave of absence from the hospital to take charge of the nurses at the Sternberg Hospital, just opened at Camp Thomas. One hundred and sixty nurses were sent to the camp and did a remarkable work under Miss Maxwell's distinguished leadership.

Active in War Service

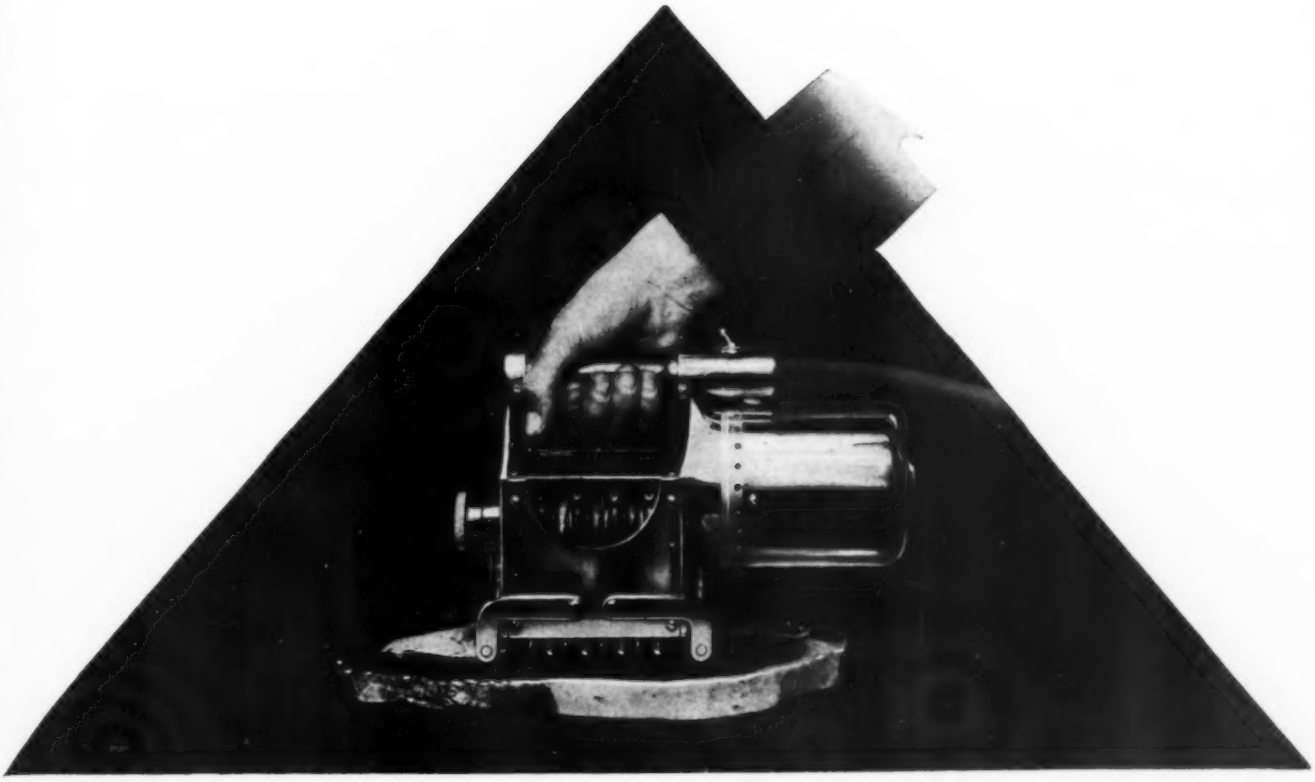
When the World War broke out, it fell to Miss Maxwell to secure the personnel for the Presbyterian Hospital unit. Miss Maxwell herself accepted the position of chief nurse. When the call came for overseas' service, it was felt that Miss Maxwell was needed most in this country although she visited the war region twice, in 1916 and 1918.

In 1917 the governors of Columbia University conferred upon Miss Maxwell the honorary degree of Master of Arts.

In 1918 she became a member of the committee for securing military rank for the Army Nurse Corps. The committee worked arduously for two years, and rank for nurses became a law by an act of Congress in June, 1920.

Miss Maxwell retired in 1921 but she continued to be genuinely and actively interested in nursing progress, although she was happy in her greater freedom, in the opportunity to indulge her desire for travel and in the enjoyment of such leisure as her life work could not give her.

Miss Maxwell was a power as well as a pioneer in the nursing profession, an inspiring teacher, a wonderful organizer and promoter, gifted with an insight into the possibilities of the nursing profession, and a leader with the faculty for achieving success despite almost insurmountable obstacles.



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The "Wellco" Electric MEAT TENDERER *positively tenders,* with equal efficiency, Beef, Veal, Mutton, Lamb, Pork, Venison, etc.; Steaks, Chops, Cutlets, Goulash, and Stew-Meats, etc. Bones do not interfere! Saves time, fuel, labor, and 1 portion in every four. Prevents complaints and loss of patronage. Builds goodwill and profits.

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Personals

DR. ARTHUR H. PERKINS has been appointed assistant superintendent of the Waterbury Hospital, Waterbury, Conn.

ALMA C. CORBITT, R.N., has been appointed successor to MAE H. FYE as superintendent of the Charleston General Hospital, Charleston, W. Va.

ADELINE M. HUGHES has resigned her position as superintendent of the Salem Hospital, Salem, Ore., and SIGNA V. WAHLSTROM has been appointed to fill the office temporarily.

SISTER M. BLANCHE, R.N., is the new superintendent of Mercy Hospital, Tiffin, Ohio, succeeding SISTER M. TAYOLA.

MOIR B. TANNER was recently appointed superintendent of the Mary I. Bassett Hospital, Cooperstown, N. Y., succeeding MRS. SYLVIA M. ROTHSCHILD.

LOIS A. ROSCOE has accepted the appointment as superintendent of the Olean General Hospital, Olean, N. Y. The position was formerly held by ELIZABETH NELL ROSS.

MARK L. BURNS has succeeded DR. ERNEST E. WHITE as superintendent of the Redlake Indian Hospital, Red Lake, Minn.

DR. GEORGE F. INCH has been elected superintendent of the Munson Hospital, Traverse City, Mich., to fill the vacancy left by JAMES DECKER.

FRANCIS B. VICARS, R.N., has resigned her position as superintendent of the Musselshell Valley Hospital, Roundup, Mont., and MRS. MAYME YURICK, R.N., has been appointed to that office.

DR. WALTER A. WEED has accepted the appointment as superintendent of the Morrell Memorial Hospital, Lakeland, Fla., to succeed DR. EUGENE B. ELDER. DOCTOR ELDER is now superintendent of the Knoxville General Hospital, Knoxville, Tenn., filling the vacancy left by J. ERNEST SHOUSE, resigned.

N. G. FAIRCHILD has resigned his position as assistant general superintendent of the Methodist Hospital, Hattiesburg, Miss.

ANNIE H. SMITH, superintendent of the Rockville City Hospital, Rockville, Conn., has resigned her position and WINIFRED H. BROOKS has been appointed as her successor.

ORLEANA PAINTER, superintendent of the Morristown General Hospital, Morristown, Tenn., died December 19, following a brief attack of pneumonia.

MINNIE GOODNOW, R.N., has left the Graduate Hospital of Philadelphia, Philadelphia, where she was directress of nurses. ELIZABETH ROSS has been appointed to fill the position she left vacant.

JOSEPH C. PURVIS is the new superintendent at Rogers Park Hospital, Chicago.

DR. E. T. OLSEN has resigned his position as superintendent of the Englewood Hospital, Chicago, and A. E. PAUL, formerly superintendent of the Lutheran Memorial Hospital, Chicago, has been appointed to fill the vacancy.

MRS. MARTHA OAKES KELLY took over the superintendency of the Braddock General Hospital, Braddock, Pa., on February 1, as successor to A. GRACE SCOTT, resigned.

DR. CHARLES GAYNOR, formerly superintendent of the Polk State School, Polk, Penn., has become superintendent of the Pennhurst State School for the Feeble Minded, near Spring City, Penn., succeeding DR. EARL W. FULLER, resigned.

DR. HAROLD S. HATCH has resigned his position as superintendent of the Sunnyside Sanatorium, Oaklandon, Ind., and will take up a private practice in Indianapolis.

DR. FRANK S. INKSETTER is chief of the medical staff and owner of the new Atlantic Shore Sanitarium and Hospital, Somers Point, N. J.

BESSIE CRUMPLER has been engaged to superintend the new Memorial Hospital, Nacogdoches, Texas.

DR. W. F. GARDNER, founder of the new Gardner Hospital, Smithland, Ky., will be superintendent and chief surgeon at that institution.

J. Z. KERR, formerly superintendent of the Ohio Valley Hospital, Steubenville, Ohio, has accepted the appointment as superintendent of Fort Hamilton Hospital, Hamilton, Ohio.

DR. E. E. SHIFFERSTINE, formerly superintendent of the State Hospital of Coaldale, Coaldale, Pa., has been appointed chief surgeon of that institution, according to an announcement by the State Department of Welfare of Pennsylvania. The name of the new superintendent has not been determined.

MARY A. SMITH has resigned her position as superintendent of the Greenville City Hospital, Greenville, S. C.

DR. JOHN W. STEPHENSON has purchased the Baptist General Hospital, Ashland, W. Va., and has renamed it the Stephenson Hospital and Clinic.

DR. THOMAS R. PONTON has been appointed superintendent of the Illinois Masonic Hospital, Chicago, to succeed DR. L. MCLAUGHLIN.

JAMES MCCOY has been appointed superintendent of the Union Printers' Home and Tuberculosis Sanatorium, Colorado Springs, Colo., as successor to JOHN C. DALEY.

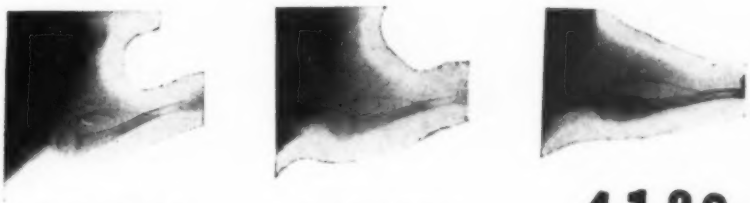
LAVETA V. PESTON has resigned as superintendent of the Girard General Hospital, Girard, Kan. The newly appointed administrator is R. KRUSE.

C. M. MASSE has been appointed superintendent of the Louis Pasteur Hospital, Worcester, Mass., succeeding V. M. BEAUREGARD.

SISTER M. CECILIA has been appointed to succeed SISTER M. CHRISTOPHER as superior at St. Francis Hospital, Breckenridge, Minn.

FERDINAND C. HILKER, formerly manager of the Lancaster General Hospital, Lancaster, Pa., has been appointed superintendent of the Lutheran Hospital of Manhattan, New York City, succeeding HENRY J. BRANDES who was holding a temporary appointment there.

RESEARCH PROVES ANTI-RACHITIC PROPERTIES OF COCOMALT



Radiograph of the tibia of a rachitic albino rat showing the wide zone of decalcification, the so-called rachitic metaphysis. From this point on a fraction of a gram of COCOMALT was fed daily in addition to the basal rickets-producing diet (Ration 2965).

The same bone eight days later showing the beginning of the curative process. Note the deposition of calcium in the provisional zone of calcification.

This radiograph was taken at the termination of the experiment in the ninth week. Recalcification is complete and the animal is pronounced cured.

After many months of research by prominent authorities in the field of nutritional chemistry we are gratified to prove that Cocomalt, in addition to its many other attributes, contains vitamin D, the anti-rachitic vitamin which promotes normal ossification in bones and teeth. Without this vitamin or ultra-violet light, calcium and phosphorus deposition cannot occur, with the result that rickets develop. In addition, laboratory tests show that Cocomalt contains Vitamin A and B. Comparative tests also revealed the fact that Cocomalt contains, gram for gram, about the same amount of the vitamin B complex as raw whole wheat.

Cocomalt is not a medicine. It is a nourishing, easily digestible, natural food with a delicious chocolate flavor. Physicians who experience difficulty in persuading patients to drink milk will find Cocomalt invaluable

Cocomalt increases the caloric value of milk 70%. For that reason alone it is useful in diets of convalescents when the physician wishes to build up body weight as rapidly as possible. Served with milk, Cocomalt makes an excellent supplement to the average dietary, adding proteins of the highest biological quality, mineral elements (especially calcium and phosphorus) in the proper proportions and vitamins A, B (complex) and D.

Cocomalt is recommended for convalescents and growing children and can be fed to advantage wherever milk diets are indicated.

Cocomalt

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News of the Month

A. H. A. Completes Committee Membership List

With appointments made to the committees on clinical and scientific equipment and work, on dietary service and equipment and on the training of hospital executives, membership lists of all committees of the American Hospital Association are now completed. The names of the committee members, with these three exceptions, were published in THE MODERN HOSPITAL for January. Names of the members of the three remaining committees are:

Clinical and Scientific Equipment and Work

Dr. John A. Lichty, Clifton Springs Sanitarium, Clifton Springs, N. Y., chairman.

Dr. John F. Bresnahan, St. Mark's Hospital, New York City.

Dr. H. D. Clough, Rochester General Hospital, Rochester, N. Y.

Dr. John G. Copeland, Albany Hospital, Albany, N. Y.

Dr. T. A. Devan, Strong Memorial Hospital, Rochester, N. Y.

Dietary Service and Equipment

Mary A. Foley, Kahler Corporation, Rochester, Minn., chairman.

Frances Chappell, Oklahoma M. E. Hospital, Guthrie, Okla.

E. M. Geraghty, Lakeside Hospital, Cleveland.

Dr. Harold W. Hersey, Bridgeport Hospital, Bridgeport, Conn.

Missouria Martin, Muncie Home Hospital, Muncie, Ind.

Training of Hospital Executives

H. J. Southmayd, Division of Rural Hospitals, Commonwealth Fund, New York City, chairman.

Asa S. Bacon, Presbyterian Hospital, Chicago.

Michael M. Davis, Jr., executive secretary, Associated Out-Patient Clinics Committee, New York City.

E. S. Gilmore, Wesley Memorial Hospital, Chicago.

Ada Belle McCleery, R.N., Evanston Hospital, Evanston, Ill.

Dr. M. T. MacEachern, American College of Surgeons, Chicago.

Dr. C. W. Munger, Grasslands Hospital, Valhalla, N. Y.

Dr. W. C. Rappleye, Commission on Medical Education, New Haven, Conn.

Trustees' Section

Arthur A. Fleischer, president of board, Jewish Hospital, Philadelphia, chairman.

Build $6,000,000 Addition at Lenox Hill Hospital

Final plans for the reconstruction of Lenox Hill Hospital, New York City, at a cost of $6,000,000, were announced recently by Karl Eilers, president of the hospital. When completed it will contain 600 beds.

The hospital, one of the oldest in the city, formerly was the German Hospital and Dispensary. Due to the removal of the Presbyterian Hospital to the Medical Center, the facilities of Lenox Hill Hospital have been severely taxed in meeting the needs of the neighborhood. Contracts for razing the nonhospital structures on the site have been awarded and work was started early in January.

In announcing the reconstruction plans, Mr. Eilers made a public appeal for funds, the first public appeal ever addressed by the hospital since 1861. Heretofore it has been supported by contributions of friends and trustees. During its history 3,569,815 days of treatment have been given, of which 2,500,000 have been free. These figures do not apply to the extensive dispensary and outpatient department.

The plans for the new structure call for four wings, so constructed that central elevators, kitchens and other service departments can be built. The new unit will give the hospital 270 more beds, of which 178 will be in the wards and the rest in private and semiprivate rooms.

New Building for Oldest Women's Hospital in Middle West

The Women's and Children's Hospital, Chicago, with its staff made up entirely of women, is soon to open a new building. This hospital, with its record of sixty-five years of service to the city's women and children, is one of the oldest in the city.

It was established in 1863 by Dr. Mary Thompson to care for the widows and children of Civil War veterans. After the Chicago fire the hospital was rebuilt and a medical school for women established. The hospital now has the largest clinic in the city. The new hospital is to be a teaching center for women in medicine, where they may serve their internship and do research work.

Hospital-Commercial Project Started in Chicago

The old North Chicago Hospital is to be razed to make way for a more modern seven-story institution, together with a store, office, hotel and garage project, work on which is already under way. The hospital, representing the first unit of the enterprise, is to be erected by the North Chicago Hospital, Inc., and completion is promised about June 1, 1929. The commercial unit is expected to be completed by the end of the year. Many physicians are members of the corporation backing the movement.

The seven-story hospital will have a capacity of 300 beds. Two floors, the second and sixth, will be devoted exclusively to the most modern pathological, physiotherapy, obstetrical and x-ray departments. The nursery will be enclosed with large plate glass windows.

On the first floor will be an attractive lobby with stores on each side of the arched entrance. On the roof will be a solarium and promenade that will be completely enclosed. Food service will be from a central kitchen. The institution has been leased to the New North Chicago Hospital Association for fifteen years. The hospital project calls for an expenditure of $950,000. The commercial buildings will represent a valuation of $800,000.

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SENT ON REQUEST

When Planning
PLAN TO SERVE PATIENTS *Hot Meals*

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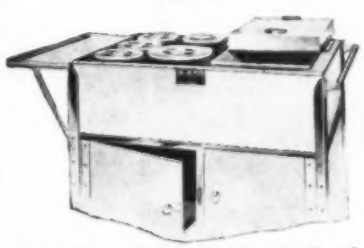
Model 5A—Serves 5 dish meal to 35-50 patients.



Model 8EL—30-40 bed section. Equipped with a meat tray.
Models for 50-70 bed sections described in catalog.

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Ideal
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News of the Month

B. K. Hollister Taken by Death

B. K. Hollister, secretary of THE MODERN HOSPITAL Publishing Co., Inc., died suddenly at his home in Chicago, January 3. Mr. Hollister had been in the publishing business for many years and was well known to a large number of hospital administrators and those manufacturers serving the hospital field. He was formerly a member of the firm, Hollister and Wilson, Chicago, and is said to have been the originator of merchandising catgut in germproof glass containers. During the World War he served as an important part of the government's purchasing department of pharmaceutical supplies. His son, John Hollister, is the superintendent of the Washington Boulevard Hospital, Chicago.

New Hospital for Insane Planned for New Jersey

New Jersey soon will have another hospital for the insane. The number of mental cases in the state has increased greatly during the last few years. Purchase of six farms with a total of 509 acres, at Hillsdale, Monmouth County, was recently made by the state board of control, State Department of Institutions and Agencies, and it is planned to construct a $4,000,000 institution on this site.

The institutions for the insane at Trenton and Morris Plains have been overcrowded, and the new institution, which will have a capacity of 2,000 beds, is expected to overcome the congestion.

Convict labor will be used to perform the preliminary work on the new institution, and actual construction will be started on July 1, 1929, when the funds from the half mill tax become available. A dairy and produce farm will be operated by the patients of the institution when the project is completed.

Amended Schedule Provides More Funds for Brooklyn Hospital

An amended schedule of the board of estimate and apportionment, New York City, for the reconstruction of the Kings County Hospital, Brooklyn, provides for a total expenditure of $7,985,000 instead of $6,325,000, the sum originally appropriated.

The new main structure will provide for a normal occupancy of 1,500 patients with emergency accommodations for several hundred more. Separate tall wings for men, women and children will be united by connecting structures extending as high as the third floor. Space has been reserved in the main structure for the out-patient department of the hospital. The preliminary plans show buildings of unique design, in which outdoor accommodations for patients on all ward levels and on the roof as well have been stressed. In connection with each ward unit there will be separate balconies or loggias for bed patients and convalescents, a large sun room and a convalescents' dining room. The general administration of the hospital will be carried on in the new main building which will contain in addition the hospital kitchens, dining rooms for the help, emergency wards, operating rooms, the x-ray department and the department of physiotherapy.

On the completion of the main building, the more antiquated buildings of the present Kings County group will be demolished but some of the more modern structures now in existence will be utilized as part of the reconstructed plant. These include the nurses' home to which an addition will be built, the laboratory building that is eventually to be expanded, the staff house, the women's dormitory and the laundry. The power plant is to be remodeled.

The Kings County Hospital, heretofore one of the hospitals of the department of public welfare, became one of the units of the recently consolidated Hospital Department of the City of New York, February 1.

The plans for the new buildings are being developed by LeRoy P. Ward, architect, under the direction of Dr. S. S. Goldwater, consulting hospital expert for the board of estimate and apportionment.

First Appointment to New Fellowship Is Made

A clinical fellowship in internal medicine has been established at Montefiore Hospital, New York City, by S. G. Rosenbaum, president, board of trustees. The fellowship began January 1, and Dr. M. M. Harris has been named as the first appointee.

Catholic Hospital Association to Convene in Chicago, May 6-10

The fourteenth annual convention and the third annual clinical congress, Catholic Hospital Association, will be held at the Stevens Hotel, Chicago, May 6 to 10.

In the preparation of the program the cooperation of all allied organizations has been enlisted. In addition, the assistance and active interest of all hospital superintendents in and around Chicago have been secured. The officers of the association are arranging the program from the recommendations of the hospital superintendents, which means that the delegates will have scheduled for them discussions and demonstrations of their own choice. This will make the program interesting, instructive and practical, not only for general but for specific application. Included in the program will be topics of interest for the doctor, nurse, advisory board member and laymen and laywomen, since their relationship to the hospital is so close that, for the hospital's success, a definite knowledge of hospital work and its progress becomes a distinct part of their equipment.

For the exhibit proper, every booth will be a practical clinic. This will give to the exhibits an educational feature, and will lend to the exhibits in general a scientific approach to equipment and supply requirements that will be of practical value.

News of the Month

College of Surgeons to Collect Data on Cancer

A bureau of archives on all known cases of cancer in this country and Canada has been established by the American College of Surgeons and compilation of the records is now in progress. The archives are to be kept in the headquarters of the association, 40 East Erie St., Chicago.

Every known case of cancer in this country or the dominion will be reported to and catalogued by the bureau, with a complete family history of the patient, details of the case and records of the health of the progeny. Contributing to the total of information will be every hospital in both countries that measures up to the standards of the College of Surgeons—about 2,000 in all.

Thus within a short time will be made available for medical men records and statistics on cancer cases that will be of inestimable value in determining methods of treatment. Every phase of the disease will be studied.

Department of Hospitals Created in New York City

The mayor of New York City, states a report in the *Journal of the American Medical Association*, has recently signed a bill constituting the city department of hospitals, which is to become effective February 1, 1929. The bill provides for the unified control and administration of the city's twenty-six hospitals under a commissioner of hospitals who has not as yet been appointed. Most of these hospitals are now under the jurisdiction of the department of public welfare. Some, however, are managed by the department of public health, and others by the trustees of Bellevue and Allied hospitals. The new department was created in the interest of efficiency and economy, it was stated.

Toledo Academy of Medicine Holds Annual Meeting

The twenty-seventh annual meeting and banquet of the Toledo Academy of Medicine, Toledo, Ohio, were held on January 4. The event marked the seventy-seventh anniversary of organized medicine in Toledo. The committee planning the banquet and program was composed of Dr. John F. Wright, Dr. Fred M. Douglass and Dr. C. W. Waggoner.

Dedicate Large Unit at Hahnemann Hospital

The coming of the new Year was celebrated at Hahnemann Hospital, Philadelphia, with the opening of a new 738-bed building, which is to carry on the work of the old unit that was closed after forty-four years of service, according to an announcement in the *Journal of the American Medical Association*. In the new building are 185 private hotel type rooms which can be converted into suites, and 333 ward beds. The nursery has accommodations for ninety-two babies, and on the upper floors there are 126 semiprivate beds. The bedrooms on the seven upper floors have rubber flooring.

Due to the opening of this new institution, the Philadelphia Home for Infants has discontinued its services since it is believed that the social service department of the new hospital can adequately carry out its former duties.

Break Ground for St. Louis Deaconess Hospital

Ground was broken early in December for the new Deaconess Hospital, to be erected in St. Louis, Mo., at a cost of more than $1,000,000. The structure will be seven stories in height and when completed will have a 218-bed capacity.

The new structure will be reminiscent of Spanish architecture in design, with two elevator penthouses to break the skyline. The exterior will be of light buff brick trimmed with Bedford limestone. Marble and terrazzo have been specified for the interior, with rubber tile for the corridors, and soundproofing for certain parts of the building. A large roof garden and sunroom will be included. The grounds will be landscaped for the use of convalescent patients.

Nurses' Home of Lawrence-Memorial Hospitals Is Completed

The Nanine Lawrence Pond House for student nurses of the Lawrence and Memorial Associated Hospitals, New London, Conn., which was built at a cost of $150,000 and equipped at a cost of $50,000, is now completed. The building was opened for inspection on December 14.

The physical structure itself is imposing and harmonizes with the colonial architectural design of the hospital. The granite base and limestone trim set off to good advantage the rainstruck red brick. Each of the floors is of solid concrete construction. The partitions are all of gypsum block construction, fireproof and substantial. The roof is of concrete covered with a roofing of tar and slag.

The impression of beauty, strength and adaptability conveyed by the exterior is enhanced when the interior is inspected. The arched doorways leading to the corridors on either side of the entrance to the lounge ahead or to the waiting rooms on either side fit harmoniously into the scheme.

Telephones are provided on each floor and an incinerator chute to the ground floor is available from every floor. One elevator of the electric pushbutton type has been installed and two different sets of stairways run up through the building, both of which are set in fireproof wells.

News of the Month

Waldheim Gift to Provide Clinic for Jewish Hospital

A new building, a health clinic, is to be erected at the Jewish Hospital, St. Louis, Mo., at a cost of approximately $200,000. The money has already been provided through a gift of the president of the board of trustees, and his wife, Mr. and Mrs. Waldheim. It will be known as the Waldheim Health Clinic.

The unit will be erected on a site adjacent to that on which the main building is located and, according to an announcement in a recent issue of the *Western Hospital and Nurses' Review*, it will be a five-story building harmonizing architecturally with the present structures. The first three floors of the new building will be used as a dispensary. Laboratories will occupy the two upper floors.

Dallas Citizens Plan for New Children's Hospital

A hospital exclusively for children is now being planned by a group of Texans interested in child welfare, and according to present plans a drive for funds to build such a hospital in Dallas, Texas, will be inaugurated early in the Spring. The hospital will be known as the Texas Children's Hospital and will be built and equipped at a cost of $550,000. In addition an endowment fund of $1,000,000 will be provided to care for fifty free beds. The plans call for 100 beds in all. The ultimate hope of the sponsors is to finance the hospital entirely on a charitable basis. The hospital will be for the use of children throughout Texas and the South.

Methodist Hospitals and Homes Plan Two-Day Session

The annual meeting of the National Methodist Hospitals, Homes and Deaconess Convention is to be held at the Congress Hotel, Chicago, February 6 and 7. A large part of the convention program will be given over to group discussions. The annual banquet will be held on Wednesday evening.

The program for Wednesday will be opened with devotional services by J. A. Diekmann, president, Bethesda Hospital, Cincinnati. G. T. Notson, superintendent, Methodist Hospital, Sioux City, Iowa, will give the president's report, G. M. Hanner, superintendent, Beth-el General Hospital, Colorado Springs, Colo., the secretary's report, and Bascom Robbins, Kansas City, Kan., the treasurer's report. The keynote address will be given by a bishop of the Methodist church. Round table group meetings will occupy the afternoon with the following topics and speakers: "Hospital", Dr. C. S. Woods, superintendent, St. Luke's Hospital, Cleveland; "Homes for Children", Dr. S. W. Robinson, Chicago; "Homes for the Aged", the Rev. Lloyd Strecker, Cincinnati, and "Deaconess Work", Mrs. Luella M. Evelsizer, Cleveland. Dr. G. T. Notson will act as toastmaster of the banquet Wednesday evening. Following the banquet a symposium will be held. The Rev. Warren Cook, Brooklyn, N. Y., will speak on the healing ministry, J. Grant Sehick, Blair, Neb., on obligations to the aged, Frances Knight, Detroit, Mich., on responsibility for the homeless child and Sadie Hagen, Boston, on deaconesses and the church.

Thursday will be devoted to general business meetings, to be followed by group and round table meetings, reports of committees, reports of group meetings, findings committee and continuation plans.

Mt. Sinai and Jewish Maternity Hospitals Merge

Announcement of the merger between the Jewish Maternity Hospital and Mt. Siani Hospital, Philadelphia, was recently made in the *Journal of the American Medical Association*. The Jewish Hospital will take over the new maternity building which is now under construction at Mt. Sinai, and its old buildings will be used for other purposes. The merged institutions will go under the name of Mt. Sinai Hospital.

State Aid for Hospitals Basis of New Jersey Survey

To determine the advisability of providing some form of state aid, a study of New Jersey hospitals is now being made under the direction of Commissioner William J. Ellis, according to an article in the *Trained Nurse and Hospital Review*. This survey, carried on through questionnaires, is bringing to light information that will benefit not only state officials but all hospital executives. When the survey is finished, the data will be placed at the disposal of the New Jersey Hospital Association. New Jersey hopes through legislation to improve professional care in hospitals, including nursing homes and special hospitals used for the treatment of compensation cases.

New Orleans Presbyterian Rounds Out Twenty-One Years of Service

A special celebration was held in the Corinne Casanas free clinic, Presbyterian Hospital, New Orleans, January 23 to mark the completion of the twenty-first year of service for the hospital.

The celebration was held under the auspices of the women's auxiliary of the hospital. A feature of the occasion was the graduating exercises of the class of 1929 of the training school for nurses, with addresses by the Rev. Dr. Lewis S. Mudge, stated clerk of the general assembly, and the Rev. Dr. James H. Speer, of the general council, general assembly of the Presbyterian Church.

The Presbyterian Hospital of New Orleans, one of the outstanding institutions of its kind in the South, is continuing a program of expansion. Three new buildings to be built in the near future call for an outlay of $2,000,000.

News of the Month

$252,527,000 to Go for Hospital Construction This Year

During the last eight years the *Architectural Forum* has published an annual forecast of building activity in the United States which has closely approximated the actual figures compiled at the close of the year.

The forecast for 1929 appears in the January issue. It predicts that the coming year will be a busy one in the building field, possibly busier than any preceding year, although 1928 showed an unusual amount of construction. In this forecast, hospital construction looms large, amounting to $252,527,000 and coming seventh in the list of the various types of buildings planned. It is exceeded only by apartments, office buildings, schools, public buildings, industrial construction and hotels.

It further points out that well over eight billion dollars' worth of new structures are being built annually, to which may be added repair and replacement bills to bring the total close to ten billion dollars, making the building industry by far the greatest of the basic industries of the country.

Doctor Goldwater Retires From Directorship of Mt. Sinai

Dr. S. S. Goldwater announces his resignation as director of Mt. Sinai Hospital, New York City, with which institution he will hereafter be associated as consultant to the board of trustees. Doctor Goldwater will in future give his professional attention exclusively to the planning of hospitals, an occupation which has absorbed the greater part of his time since he resigned as health commissioner of New York City in 1915.

Crippled Children Benefit by $2,500,000 Gift

A trust fund of $2,500,000 to be distributed among hospitals and homes for orphans and crippled children during the next twenty years has been created by Bernhard Baron, tobacco and cigarette manufacturer of Great Britain. The deed of trust stipulates that 75 per cent of the funds shall be given to Christian and undenominational institutions and 25 per cent to those under Jewish control.

Teachers College Dietitians on Southern California Program

The thirty-second meeting of the California State Dietetics Association, Southern Section, was held January seventh.

Elizabeth Hayward, California Fruit Growers' Exchange, told of her recent trip to the East where she attended the National Convention of the American Dietetics Association and visited a number of clinics. Helen Anderson, La Jolla, gave additional reports of the convention.

Emma A. Gunther and L. Ray Balderston, Teachers College, Columbia University, were the visiting speakers of the evening.

Dr. Helen Thompson, University of California, Los Angeles, gave a concise report of Professor Windhau's research work with ergosterol which brought him the Nobel Chemistry prize of 1928. This is the first occasion of the prize having been given for research in the chemistry of nutrition.

Dr. E. H. Risley, dean, Medical College, Loma Linda, Calif., gave an interesting talk at the December meeting on diet in the treatment of high blood pressure, hypertension and arterial diseases.

Alfred Hospital Plans to Remodel Out-Patient Department

The casualty department of the Alfred Hospital, Melbourne, Australia, is to be remodeled shortly. This is the first part of a plan to remodel the whole of the out-patient department, according to the September issue of The *Alfred*. The building is to be divided into two blocks. The first block will be the operating block and will be altogether new. The second block will comprise the old casualty block which will be partly demolished and remodeled and considerably extended. It will be used for casualty receptions, examination and dressings. Between the two blocks will be a covered way, on one side of which will be the nurses' duty room and public toilets, and on the other side provision for a recovery ward.

Gift of $20,000 Is Made to Columbus Hospital

A gift of $20,000 has been made by Dr. Albert J. Pounds, Delaware, Ohio, to the White Cross Hospital, Columbus, Ohio. The gift will be dedicated to the roentgen ray department. Doctor Pounds has practiced medicine for forty-seven years in Union and Delaware Counties. He is a former county health commissioner.

Chest Clinic Is Established at Mount Zion, San Francisco

A chest clinic has been established at Mount Zion Hospital, San Francisco, Calif., by Mrs. Abraham Lincoln Brown as a memorial to her husband. The new department will consist of three branches: a pulmonary clinic; an allergic clinic; a chest department within the hospital for the diagnosis and treatment of all thoracic conditions, particularly surgical.

The purpose of the fund provided by Mrs. Brown is not only for the purchase of apparatus and maintenance of the department but for subsidizing beds for worthy patients requiring diagnosis or surgical treatment.

DIETETICS AND INSTITUTIONAL FOOD SERVICE

Conducted by LULU G. GRAVES, 7 East 54th Street, New York, MARY A. FOLEY, Director of Dietetics, Kahler Hospital, Rochester Minn. and S. MARGARET GILLAM, University Hospital, Ann Arbor, Mich.

According Cheese Its Rightful Place in the Hospital Dietary

By DAHY B. BARNETT, B.S.
New York City

THE origin of many of to-day's prepared foods is lost in time. Cheese, however, has a story that may or may not be as authentic as Charles Lamb's tale of the first roast pig.

The story is to the effect that centuries ago an Asian traveler one morning filled with milk his canteen made of a dried sheep's stomach, and started on his journey. He trudged on throughout the hot day, stopping only in the evening to refresh himself with a drink of milk. To his amazement, the milk refused to pour and on cutting open the skin to investigate the reason, he found in place of the milk a mass of white curd—the first cheese. Whether or not this story is true, there is no doubt that centuries ago cheese became a part of the staple diet of many nations. Its history extends through Biblical, Greek and Roman days down to the present.

With cheese occupying a place so prominent in the dietaries of this and other nations, it is obvious that it must have real virtues. Its main virtue lies in the fact that it is one of the most concentrated sources of protein. It is also rich in the minerals of milk—phosphorus, calcium and iron. Fat-soluble vitamin A which is so well represented in milk is retained to a large extent in cheese. Vitamins B and C are also present but to an extent that has not been accurately determined. From this, it is clear that the reasons for the use of milk in the diet apply also, and with almost equal force, to cheese. In fact, the concentrated character of cheese makes its value in some cases even greater. A pound of cheese is estimated to represent the protein and fat of a gallon of milk.

While the relative prices of meat and cheese vary in different sections of the country, it is generally true that the same amount of money will purchase almost twice as much food value if it is spent for cheese than if it is spent for meat. The caloric value of cheeses varies but American Cheddar cheese will furnish as much as 1900 calories to a pound. In some localities, milk may be a less expensive source of protein but almost everywhere

Macaroni and cheese when properly prepared is an appetizing dish.

Different kinds of cheese sandwiches identified by their shape are popular for bridge parties.

cheese is cheaper than meat or fish. Cheese has the added value of being base forming, rather than acid, as are meats.

From the viewpoint of economy, then, cheese is entitled to respectful consideration in the hospital dietary. While Cheddar cheese is not always to be recommended for the patients' trays, it should most emphatically be used more often in the nurses' and doctors' diets. Either at luncheon or at supper it may provide the protein. Cheese may well be substituted for meat more often than it usually is, for it can be used in a great variety of ways and its varied flavors do much to obviate monotony in the menus.

The large calcium content of rennet cheeses is one of its most important values. It is well known that the American diet is notably low in calcium, and cheese, because it contains a higher proportion of calcium and phosphorus than any other food, is a particularly good food to use in remedying this defect. Meat and bread form a balanced ration if their supply of protein and carbohydrates alone is considered, but they are particularly low in minerals. A simple and effective way to restore the mineral balance is to increase the amount of milk and cheese in the diet. Cheese is also an excellent supplement to the cereals since it is rich in the amino-acids in which they are poor. For this reason its use with macaroni, spaghetti and rice is dietetically good.

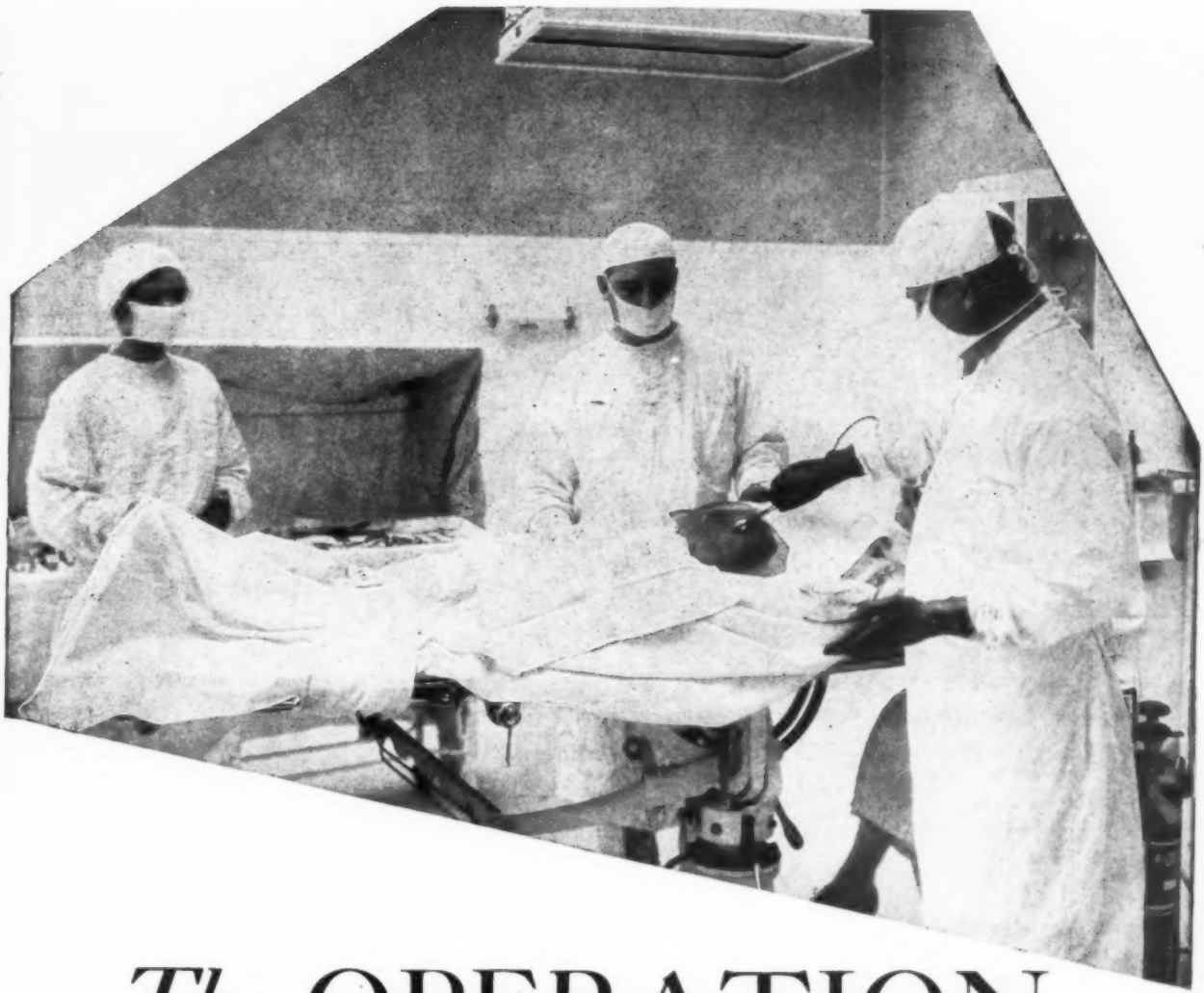
In connection with the calcium content of cheese some recent work done by Dr. Katherine Blunt and Emma Sumner of the University of Chicago is of importance. The experiment was to determine whether the calcium content of cheeses coagulated by the action of rennet differed from those coagulated by the action of acid. American Cheddar cheese, Switzerland cheese and cottage cheese were the three tested. The conclusions were that cottage cheese, unlike hard rennet cheese, must be regarded as a poor source of calcium. The authors say: "For every 100 grams of protein in the cheeses there are 3.37 grams of calcium in the Swiss, 2.83 grams in the Cheddar and 0.62 grams in the cottage cheese."

The fat content varies greatly in different cheeses, depending on the amount in the milk used. Some cheese is made from whole milk, some from skimmed or partially skimmed; in other cases cream is added to whole milk, as in cream cheese.

As would be expected, the fat-soluble vitamin A is present in considerable amounts in cheese although it, too, varies. Dr. Agnes Fay Morgan of the University of California recently tested three types of cheeses for the vitamin A content, and her conclusion was that American Cheddar and Limburger cheese (New York) retain the vitamin A well, while Switzerland cheese is not so rich.

She says: "Young rats suffering from vitamin A deficiency recovered rapidly from the usual eye disease and made normal growth upon addition to their diet of one-half gram daily portions of California cream cheese, Cheddar type, or Limburger cheese (New York). These cheeses appear to retain in an unusually concentrated form the milk's vitamin A from which they are made.

"Under similar circumstances one-half gram doses of Swiss cheese (Switzerland), did not cure ophthalmias or restore growth. With one gram doses growth was normal, but eye disease persisted to some extent. The deficiency of this cheese may be due either to the rela-



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tively long heating and curing processes used, or to selective bacterial action."

From this description of cheese it is seen that it is capable of holding an important place in the diet. Sometimes discomfort after eating cheese, according to Sherman, "may be due in part to irritation of the stomach by volatile acids and some of the protein cleavage products developed during the ripening." But it is more apt to be due to the cheese's having been eaten as an additional part of the menu without regard to its highly concentrated protein content. In fact, cheese, eaten with

Rice molds on broiled tomato with cheese sauce please the invalid palate.

other foods in judicious amounts, has a distinct value in increasing the digestibility of the entire meal. As to its supposed constipating effect, it may be pointed out that the Scandinavians and English who use much more cheese than Americans are not troubled with constipation to the same extent that Americans are.

Of the cheeses in use in the hospital, American Cheddar, cottage cheese, cream cheese and Neufchatel are probably the most common. But there are other kinds that could be used profitably for special occasions or for variety.

American Cheddar has several advantages. In the first place, it is one of the best cheeses for cooking purposes. It will melt easily in a moderate heat, and unless the temperature rises too high it will not become tough and stringy as will so many others. It is a cheese made from whole milk and therefore is a remarkably good substitute for it. Although the Cheddar cheeses are commonly bought in the familiar cartwheel or cylindrical shapes, it is possible now to purchase five-pound bricks done up in tin-foil and minus the objectionable rind.

Another hard cheese in considerable use is the Switzerland cheese—the pale yellow cheese with the large eyes that are uniform in size and evenly distributed. Emmenthaler is another name for Swiss cheese. Both Cheddar and Swiss cheese should be stored in a cool dry place, protected from draughts. After being cut, the cheese should be covered with a damp cloth to prevent its drying out and thus impairing the flavor.

The most common soft cheeses in use in hospitals are cottage, cream and Neufchatel. Cottage cheese is made from soured, whole milk. Neufchatel varies. The best is made from whole milk, but often skimmed or low-grade milk is employed. Consequently, the fat content varies. Cream cheese varies also. It may be made from rich cream, from thin cream or from a mixture of whole milk and cream. Cottage cheese is commonly sold in butter tubs or in paraffin paper containers. Cream cheese and Neufchatel are put up in tin-foil wrappers, in lots of varying sizes. The small pieces are useful for individual services. All three of these cheeses should be used as soon as possible after they are manufactured—within two or three days. They should be kept in a cool place.

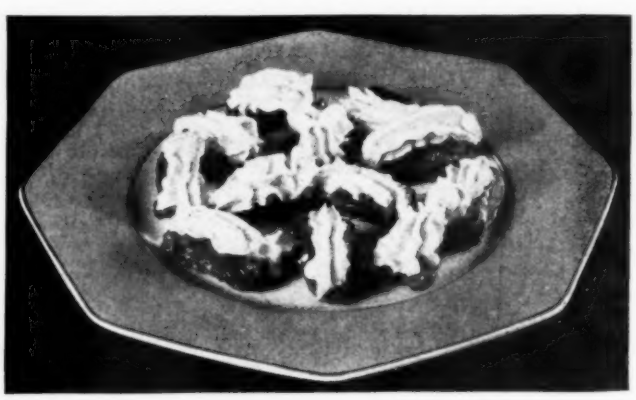
Brie and Camembert are other outstanding examples of soft cheeses that are used in this country. Camembert is made of cow's milk of unusual richness and is so processed that it develops a rind composed of molds and dried cheese. The interior is a waxy creamy mass, sometimes almost fluid in consistency and with a mild yet individual flavor. Camembert is always molded in small pieces and, as commonly bought in this country, is found in triangular tin-foil wrapped pieces weighing between one and two ounces, with several to a box. Camembert is often called the queen of cheeses.

The consort of the queen is Roquefort, the king of cheeses. This cheese is made of pure sheep's milk which is usually rich in cream. When ready for use, it is of a pale color marbled with the green mold that gives it its characteristic flavor. Roquefort cheese will keep several months in perfect condition if stored in a cold, dark place where it is well protected from flies. As it breaks easily it should be handled gently. A fine wire, a thin table knife or a knife with an oiled paper over it should be used to cut this variety of cheese.

Parmesan and Romano are two hard Italian cheeses that should be grated before being eaten. The grated cheese may be kept on hand in air-tight jars. Edam is a Dutch cheese that comes in round balls colored a peculiar yellowish red. It has remarkable keeping qualities.

The use of cheese depends, naturally, on its flavor and consistency. Camembert and Brie are put up in individual portions and may be served with crackers as the dessert course or following it. Roquefort, too, is usually served as a delicacy at the end of the meal; it is particularly delicious served with crackers and fresh pineapple. However, because it is a dry cheese, it can readily be crumbled and mixed with salad dressings for use on mild salad greens.

Parmesan and Romano are also high in price, but a relatively small amount of the grated cheese when mixed with or sprinkled over a dish will impart a characteristic



Dates stuffed with cream cheese.

flavor at a cost which does not preclude its occasional use. Dropped into melted butter before pouring it over asparagus or cauliflower, or sprinkled on onion soup, it makes a delicious food a distinctive one.

Cheddar cheese is delicious in many casserole dishes. It may well be included in scalloped dishes. Baked potatoes sprinkled with the cheese, or mashed potatoes with the grated Cheddar beaten into them strike a new and welcome note. Creamed onions or cauliflower may have cheese melted in the white sauce. Eggs and grated cheese make another pleasing combination.

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Cream and cottage cheese may be used in as many ways as the Cheddar, although they are not suitable for cooking purposes. Cream cheese, crackers and jelly are well known as a dessert. But did you know that cottage cheese can have some tart jam or jelly, such as currant jelly, strawberry jam or apricot marmelade, placed on it generously and thus provide a rich food attractive alike to the palate and to the eye?

A slice of pineapple on a lettuce leaf forms the basis of many attractive salads. In one, a spoonful of mayonnaise is placed in the hole of the pineapple; then cream cheese is pressed through a sieve or potato ricer and let to fall as it will, making fantastic designs on the pineapple. A Maraschino cherry, sprig of parsley or other garnish makes a pretty finish to the salad.

Plain cottage or cream cheese is a well liked stuffing for dates and prunes. Green or red sweet peppers may have the seeds and white part removed and then be stuffed firmly with the cheese. The pepper is chilled and, before serving, is sliced crosswise; thus a green or red rim encloses the white cheese.

Either of these cheeses may be mixed with chopped nuts, chopped Maraschino cherries, chives, capers, peppers, pimientos and other flavorful foods to be used either as balls to adorn salads or deserts, and to add food value, or to stuff foods as has been suggested.

Although the consumption of cheese in this country has increased from 3.5 pounds in 1921 to 4.36 pounds in 1926 it is far below the European mark which ranges from 8.9 pounds in Great Britain to 23.3 in Switzerland. A wider knowledge of the value of cheese in the dietary will result in savings in money. It will also increase the variety of menus. And not least among the good results will be its beneficial effect in lessening disorders due to deficiencies in the diet.

Physicians Object to Blue Island "School of Health"

A public "School of Health" in Blue Island, Cook County, Ill., does not have the approval of the Southern Cook County Branch of the Chicago Medical Society, according to a report in the *Ohio State Medical Journal.*

The physicians object to the establishment of such a "clinic" or "school of health" on the grounds that it will be maintained as are all public and most private charities, not for the poor alone but for all who apply, and that it abrogates the principle that charity should cease when an individual is able to discharge the duties of citizenship. They further say that the individual who is entitled to medical charity is he who is an object of charity in other respects. If he is financially able to do so, he should pay his doctor as well as his grocer and his coal man. Any organization that pauperizes the individual destroys a part of his self-reliance and self-respect and makes him a poor asset to any community.

Restaurant Tax Aids Hospitals in Quebec

Through the cooperation of the restaurants in the province of Quebec, Can., in enforcing the meal tax which was inaugurated because of the insistent demands of hospitals and other institutions for more money, the collection of $300,000 was made possible during the last year. The operation of the law is simple, as is explained in a recent issue of the *Pennsylvania Medical Journal.* On each meal eaten in a restaurant for which the check amounts to more than a dollar, a tax of 5 per cent is added to the amount paid by the customer. The law has been in operation for sixteen months, and not a single prosecution has been reported.

It is reported that those of the restaurant patrons who are strangers to the law are usually more than willing to pay the additional sum, and some even contribute a little more than is required.

Dietitians From Five States at Midwest Meeting

(*Continued from page 107*)

At 1 p.m., on Saturday, the group was entertained at a luncheon given by the Michael Reese Hospital. The afternoon meeting was held in the Sarah Morris Amphitheater of Michael Reese Hospital. Mrs. Katherine Mitchell Thoma presided. Dr. Chi Chi Wang, Nelson Morris Institute, Michael Reese Hospital, gave a brief report of five years' work on undernourished children. Both high and low protein diets of the same caloric value were given, with the result of a more rapid gain in weight by those children on the high protein diet.

Dr. M. Jampolis, of the pediatric staff, Michael Reese Hospital, gave a preliminary report of a study that he and his co-workers are making of the effect of ionized air on rachitic rats. Rats from the same litter were put on rachitogenic diets. Some were put in cages to which was conducted ionized air from which ozone and ultraviolet rays had been excluded. The others on the same diet were used as controls. The rats under treatment did not develop rickets and had fairly normal growth, while those used as controls developed rickets and died. Rats which had already developed rickets were treated and showed marked improvement. The conclusion made was that ionization of indoor air is beneficial in the treatment of rickets. Doctor Hartman, physician and co-worker with Doctor Jampolis, then gave an explanation of ions and ionization. Mr. Blum, engineer working with Doctor Jampolis, gave some of the principles of mechanical ventilation and said that if engineers were given an idea of the result wanted on ventilation, a mechanical device could be made to give that result efficiently.

Next on the program was Dr. M. G. Peterman, member of the faculty, Marquette University, and staff member, Children's Hospital, Milwaukee, who spoke on "Treatment of Epilepsy in Childhood." He emphasied the fact that the early treatment of ideopathic or essential epilepsy in children will bring about relief from attack and in time a complete cure. Change of environment is beneficial and psychic factors are important in the treatment. A regimen of regular habits must be instituted. Fear of attacks must be banished and the child made to think of himself as a normal individual. Strict adherence to the regimen for a year or perhaps two is essential. The next step is the regulation of the diet. For the first few days a fasting diet is given, with acetone usually appearing on the fifth or sixth day. Then a ketogenic diet is given of Pro—1 gm. per kg. body wt., C—15 gms., and fat to make up the needed calories. This diet is continued for from three to six months, with adjustments to meet individual reactions. The protein then is increased 10 gms., each alternate month, with the addition of 5 grams C.H.O. between.

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NURSING AND THE HOSPITAL

Conducted by M. HELENA MC MILLAN, R. N.,
Director, School of Nursing, Presbyterian Hospital, Chicago

Giving the Student Nurse the Social Health Viewpoint

By ALMA FOERSTER
Instructing Supervisor, Out-Patient Department, University of Michigan Hospital, Ann Arbor, Mich.

IT HAS become increasingly apparent to those vitally interested in the development of preventive medicine that the only method by which the public may recognize the real value of disease prevention is through an understanding of the laws of hygiene and the development of a conscious will to live in a healthful manner both of which must come by the slow process of mass education. It has become equally apparent, also, that the nurse must be the principle agent in this education of the masses along health lines.

That the word, nurse, could appear in the foregoing sentence without being prefixed by the words, public health, is indicative of another forward step that has been taken in our thinking in relation to community health problems. Since the actual scope and wide possibilities of preventive medicine have been gradually apprehended, the profession of nursing has become conscious of the fact that if it is to make its maximum contribution to this movement—the most important movement, perhaps, in the whole history of medicine—it must provide such elements of thought, such a technique in teaching in the basic course of nursing that every nurse upon graduation will possess a wider and more comprehensive viewpoint of modern health and social movements than the young graduate has heretofore possessed.

The Nurse as a Health Educator

The nursing profession is beginning to realize that its yearly allotment of so-called public health nurses—meaning nurses who through postgraduate work have acquired a broader understanding of the social and health needs of the community and who have acquired a definite technique in meeting these needs—to the field of disease prevention is not enough. It will make its maximum contribution only when each and every graduate nurse has a definite public health viewpoint and each and every graduate nurse definitely functions as a health educator whether she be a private duty nurse or an institutional nurse.

The introduction of preventive medicine, therefore, has profoundly affected the rôle or function of the nurse. She has become a health educator as well as a remedial agent. The recognition of this greater function of the nurse means the establishment of new educational objectives, objectives that must necessarily deeply affect the curricula of nursing schools.

Any curriculum adjustment or modification in a nursing school is peculiarly difficult under the present system of nursing education, because the dual function of the nursing school presents a multitude of problems that are never encountered in schools devoted to any other form of education. This dual function of the nursing school, in short, prevents freedom in experimentation and yet it is only through the actual trying out of various methods that the best and most effective means of providing for new educational demands can be ascertained. Curriculum adjustments in a nursing school, therefore, are always slow and usually represent adjustments made in the direction of avenues possible under the existing system of nursing education, rather than adjustments made in the direction of definite educational expediency.

Adjusting the Nursing School Curriculum

While nurse educators clearly recognize the new educational objectives made necessary by the change in the function of the nurse to that of a health educator as well as a remedial agent, nevertheless they have not been able to adjust the curriculum of the nursing school to meet these new demands as rapidly or as fully as necessity has appeared to require.

Up to the present time the adjustments made have taken three forms: (1) the introduction of a short course of lectures on public health or on public health nursing in the latter part of the undergraduate course; (2) a brief experience in district work for some of the seniors; (3) an elective of from three to four months in public health work for those seniors wishing to choose such an elective. While these adjustments have been a step in the right direction, further adjustments are necessary.

Some of the questions or doubts that spring to the mind following a critical analysis of these methods are: The lecture method at its best presents certain weaknesses that are recognized by all educators—it is good enough as far as it goes but it does not go far enough; if an experience is educationally worth while for some students it would appear that every student in the school should profit by it; instead of attempting to provide defi-

nite preparation in the specialties in the basic course, the basic course in the fundamentals of nursing should be enriched and strengthened.

Is the introduction of the student nurse to the broader social health movements in the senior year as sound educationally as it should be? Does not the introduction of the student nurse to a public health viewpoint at the end of the undergraduate course seem to dilute the very rich possibilities of this wider social health viewpoint? To use a homely simile—does not such a method represent a mere frosting of the cake after it is baked, rather than a thorough mixing of the ingredient into the cake throughout all of its making and baking? Would it not be possible to introduce early in the basic course the public health viewpoint and carry such elements of thought throughout the entire course? Would not this add new interest to the curriculum for the student nurse, and would it not give her a greatly broadened understanding of community health problems that lie outside the four walls of the hospital? Such questions and doubts present a definite challenge to nurse educators. The answers, of course, can be found only through a series of educational experiments to be carried on by a number of schools of nursing over a period of years.

The Work of the Instructing Supervisor

The faculty of the school of nursing of the University of Michigan Hospital, feeling dissatisfied with the present method of giving the student nurse a public health viewpoint, and realizing that only through a process of experimentation could a better plan be formulated, decided in 1926 to make certain experiments in meeting this pressing demand on the nursing school.

It seems apropos at this point to touch briefly on one or two of the salient features of the local situation that in a way complicated the problem. First, it was a definite policy of the school not to offer electives in the three-year course. The three-year course was considered to be distinctly a basic course and as such was to be strengthened and enriched only through a more careful and thorough provision for the fundamentals of nursing. Second, while the hospital was rich in clinical material, having a daily average of 1,050 bed patients and an active dispensary service consisting of eleven clinics—medicine, dermatology-syphilology, neurology, gynecology, otology, opthalmology, pediatrics, general surgery, orthopedic surgery, genito-urinary surgery and oral surgery—that cares for approximately 350 patients a day, nevertheless it was located in a small university town where the local health agencies were not diversified.

The first step taken in the attempt to solve the problem was to add to the faculty a nurse who not only had a sound preparation for the field of public health nursing, but one who had had a wide experience in dispensary work, for the faculty saw in the hospital's active dispensary service a rich field to be used, in conjunction with outside agencies, for student nurse instruction. The new member of the faculty was given the title, "Instructing Supervisor of the Out-Patient Department," and was placed in charge of the nursing service of that division of the hospital. She was given this position because the presence of graduate nurses in each clinic made her administrative duties very light, while at the same time she was in a strategic position to study each clinic in regard to the educational values it might contain for the student nurse and to command these resources in the development of the work that constituted her major responsibility—the opening of new vistas of social health work to the student nurse.

The following description of the development of the dispensary experience for the student nurse and the efforts made to acquaint her further with the local and state health agencies represents only the first year of the experiment. It is not presented as a complete or satisfactory solution of the problem; it is, in fact, almost embryonic in nature. Several years of further experimentation will be necessary before any actual conclusion may be drawn. The results, however, have been so encouraging that the experiment will be continued along the same lines during the coming year, the method of presentation and the technique of teaching being improved only as experience brings to light certain inadequacies.

In regard to the development of the dispensary experience it is well to add that a definite correlation exists between the theoretical and practical work of the student nurse. For example, when the student is having her class work in relation to medical conditions or diseases, she is gaining her practical experience on the medical wards. While on the wards her clinical experience is enriched by the use of case studies and bedside clinics that are developed under the guidance of the instructing supervisor of that particular clinical service.

The faculty decided that perhaps the best plan to adopt in utilizing the dispensary work for the benefit of the student was to assign the student for a brief experience in the out-patient division of each clinical in-patient service through which she was rotated. Therefore, before her clinical experience in medicine, let us say, was considered completed she must have had a week or ten days' service in the medical clinic.

As each student becomes acquainted with the clinic routine and has seen patients treated for two days in succession, she is given a lecture on the dispensary, or out-patient department, by the instructing supervisor of that department. First, the routine of admitting a patient to the dispensary and later to the hospital is fully explained. Since the University Hospital cares for three different classifications of patients—those who are financially unable to meet any of the expenses arising from their ill health and for whom the state or county must assume full financial responsibility, those who are capable of meeting a portion of their bill only and who are cared for by the hospital at a minimum rate and those who are fully capable of meeting all expenses arising out of their illness—a knowledge of the manner and method by which patients are received and cared for by the institution gives the student an insight into the work of the various state health agencies.

Discussing the Patient's Background

The social, economic and environmental background of the patient is then discussed. The student sees the patient first as an individual in street clothes, usually accompanied by relatives or friends, being examined in the clinic. She may see him later as a bed patient in the hospital. The students are quizzed on the various symptoms of disease as they see them and the possible environmental or occupational causes for these diseases. The student nurse in this way sees a greater number of different manifestations of disease than she would ever see in the ward. She sees the chronic, the incipient and the convalescent patient. She, also, comes to a realization of the functioning of the state health agencies. Such an experience broadens her outlook on social health conditions. It stimulates her interest in the "vertically ill" individual and gives her an understanding of the prevention of disease that she would never have had otherwise. It is interesting to note that the faculty feels that such

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an experience does much to make the student nurse see her patient not merely as a patient but as an individual with varying social relationships.

At the same time the instructing supervisor of the outpatient department was developing this dispensary experience of the student nurse she was made responsible for the course, "Modern Social and Health Movements," and in relation to this course she began to build up contacts between the student nurse and the local health agencies. The course, "Modern Social and Health Movements," as outlined in "A Curriculum for Schools of Nursing," which is inclusive, was modified somewhat. It will be remembered that the course consists of thirty hours, twenty-seven hours of which are lectures and demonstrations, one demonstration by the students and two written examinations.

The Evolution of Public Health Nursing

An introduction to the course was made by giving a bird's-eye view of the evolution of public health nursing. The religious orders and sisterhoods that visited in the homes from the earliest times to the Nightingale period were especially emphasized. In close succession followed lectures on the industrial revolution and its effect on the rural population both in England and in the United States, on the progress of science in the nineteenth and twentieth centuries and on social and economic problems of modern society such as immigration, housing and unemployment.

The special fields in public health nursing were then reviewed, an hour's lecture period being given to prenatal work, infant welfare work, preschool work, school nursing, tuberculosis work, industrial nursing, venereal and social hygiene and rural health nursing. Special outside speakers, as well as members of the university faculty, also gave lectures.

A lecture with slides on the prevention of infant and maternal mortality, with special emphasis on the Sheppard-Towner Act, was given by a member of the faculty of the school of nursing who had been a member of the personnel of the Children's Bureau, United States Department of Labor. Two lectures, "The Unmarried Mother," and "Legislations Affecting Children in Michigan," were given by members of the department of social service of the hospital. Two lectures on tuberculosis were given, one by a member of the Michigan State Department of Health and one by the director of the tuberculosis clinics, Detroit Department of Health. Two lectures on heredity and mental hygiene were given by professors from the university.

The organization and function of the Visiting Nurse Association of Ann Arbor was explained by the supervisor of that organization. Practical demonstrations in the home were made possible through the courtesy of this same organization. One student nurse accompanied the supervisor as she made the home visits, while another accompanied the assistant who covered industrial work. The student who visited the homes gave such bedside care as her hospital experience had fitted her to give, such care being given, of course, under the direction of the supervisor. In this way the student had an opportunity to visit the homes of the very poor as well as the homes of the well-to-do, and to observe the shiftless household as well as the well ordered household. She thus saw hourly nursing as it functions in the community. The student who accompanied the nurse who handled industrial work saw the general layout of first aid rooms. She saw dressings and assisted with them as she was able. She saw also the manner in which records were kept in this particular kind of nursing. The supervisor of the Visiting Nurse Service took several groups of student nurses with her when she taught a Little Mothers' League class in one of the public schools.

The county school nurse, also, generously cooperated with the school of nursing in its efforts to give the student nurses this broader viewpoint on community nursing. She took ten students with her on her school inspection visits. She also had them assist her in a smallpox vaccination campaign and in a toxin-antitoxin campaign. This, of course, gave the students valuable experience in mass preventive measures in the community. The county school nurse also asked for the assistance of ten students in a four-day campaign of preschool examinations in outlying towns.

The Red Cross nurse of a nearby town became interested in this particular method of giving student nurses a public health viewpoint and gave eight students the opportunity of observing a preschool examination campaign in her town. In both these preschool examination campaigns the students weighed and measured the children and assisted with their physical examinations.

The faculty also felt that every opportunity should be provided for permitting the students to become accustomed to speaking to groups so that they might have some practice in public speaking before they became graduate nurses, and many oral reports were called for. The oral reports were as a rule limited to five minutes. One student was required to visit the office of the city health officer and report to the class on his function, the organization of his office and on the work of the health department with relation to the water and milk supply and general sanitation. Each student was required to read a special article in the *Public Health Nurse* and to give a concise report of the article to the entire class. One student was asked to give a report on the housing code of Michigan, while other local problems were handled in the same manner.

Practical Demonstration of Class Work

During the last class period the students gave a demonstration of some particular phase of work they had witnessed during the course. One group chose as their project, "School Inspection;" another group, "The Work of a Nursery School;" another, "A Meeting of the Mothers' Club," a project that was given to show the various ways mothers and their children had been benefited by the teaching of the public health nurse.

Every effort was made during the course to stimulate the students to improvise equipment, such as they might have to do in a house, rather than merely to borrow hospital equipment. An exhibit of all these improvised articles was held and each student was given an opportunity to explain to the rest of the class how the article was made and how it was used. Some of the articles the students had contrived included a bassinet, a wooden box transformed into a premature infant bed, dressing trays for babies, hand made layettes and a dress and bloomers for the preschool child. Those members of the class who were artistically inclined prepared excellent posters on "Teaching Health Habits."

One member of this class had the proud distinction of not only having her demonstration, "Practical Cuffs for a Thumb Sucking Infant," receive favorable commendation from the class itself, but of having it appear in print in the *Public Health Nurse* for April, 1928.

This briefly represents what has been done at the University of Michigan Hospital during the last twelve months to introduce the student nurse very early in the basic course to certain public health concepts and ideas.

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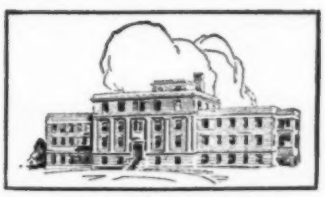

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Conducted by MICHAEL M. DAVIS, Ph.D., Executive Secretary, Committee on Dispensary Development, United Hospital Fund of New York, 151 Fifth Avenue; New York
A. K. HAYWOOD M.D., Superintendent, Montreal General Hospital, Montreal, Que

Clinic Rhymes and Doctors' Times*

THE Marquis of Plumley who has laid down rules for the proper conduct of staff meetings says that all properly constructed papers should consist of three parts—an introduction, a treatise or substance and a conclusion, especially a conclusion.

The following complies with these architectural requirements, as will be apparent.

The Introduction

Says Doctor Clough one day to me,
"Write me some lines on the O. P. D.,
For times the boys do be late, d'ye see,
And times they don't come at all," says he.
"So speak to 'em gently, but speak to 'em free,"
Says the mild mannered Doctor Clough to me.

The Treatise or Substance

Concerning punctuality and attendance at the out-patient department there are two factors in the problem: first, the patients, a body of persons who come early and too frequently leave late, a relatively immovable body; second, the doctors, a body of persons who at times come late and frequently desire to leave early, a force of somewhat uncertain direction and magnitude.

The problem is to apply the force, the doctors, to the relatively immovable body, the patients, with such intensity and direction as to remove the patients from the out-patient department within a stated, definite time without disaster and, if possible, with advantage to such patients and without too great sacrifice of time and mind on the part of the somewhat uncertain force, the doctors.

Two Existing Misconceptions

Two misconceptions about the problem exist. One is that the doctors have so little to do that they can easily give largely of their time. Many doctors have to make a living, and making a living takes time. Many, also, have other scientific and philanthropic interests which necessarily limit their time and make waste of it unfair. The second is that the patients have little to do and can easily spend time waiting in the out-patient department. Many patients sacrifice time to come to the hospital. Many women, particularly, are occupied with household duties, and unnecessary delay works a hardship to them and to those dependent upon them. Waste of their time is unfair.

I am presenting a table of the number of patients seen by the staff physicians in the general medical clinic of the out-patient department, Rochester General Hospital, Rochester, N. Y., for the months of March to November, inclusive. These have been tabulated to show the total number of patients seen by each physician, the smallest and the largest number in one day and the average.

Solving the Punctuality Problem

The number of patients examined and treated must be influenced by several factors, the first of which is the thoroughness and the rapidity of the individual physician, the second, the cooperation of the patient, limited in varying degrees by mind, education and language and the third, the time at which the physician arrives, the time at which he or she leaves and the time spent at work in the out-patient department.

If in a period of nine months one group of physicians sees an average of six or seven patients per day and another group sees an average of four to five patients per day, and if during that period the days when the four to five patient physicians are on duty represent the smallest clinic days, the conclusion seems inevitable that neither the rapidity and thoroughness of the physicians nor the lack of cooperation of the patients causes the difference. The reason for the difference lies in the punctuality and attendance of the doctors.

	Total Patients Seen	*Average Number Cases Per Day*	*Smallest Number Seen*	*Largest Number Seen*
Dr. A.....	138	4	1	6
Dr. B.....	253	7	2	11
Dr. C.....	189	6	3	8
Dr. D.....	193	5	1	9
Dr. E.....	156	4	1	7
Dr. F.....	164	6	2	11
Dr. G.....	230	7	3	11
Dr. H.....	175	4	1	10
Dr. K.....	141	4	2	9
Dr. M.....	93	4	1	8
Dr. R.....	74	4	1	6
Dr. T.....	231	6	2	11

As a means of solving the problem the hospital should and must provide all the help necessary in the way of

*The substance of an address by Dr. C. R. Witherspoon to the staff of the Rochester General Hospital, Rochester, N. Y., contributed through the courtesy of Dr. Christopher G. Parnall, medical director.

personnel and equipment in order to make lighter the work of the doctors. The physicians should and must use every effort to meet the obligations of their position by such punctuality, regularity in attendance and provision for substitutes in case of absence as to insure good and fair treatment to patients and courteous treatment to other physicians and workers on whom the burden of their undone work must fall.

Conclusion

Will the Doc,
Punch the clock,
On the dot,
Or not?

Providing Proper Care for the Chronic Sick

Patients suffering from chronic diseases may be classified into three groups: those requiring medical study for diagnosis and treatment, those requiring chiefly skilled nursing care and those requiring only custodial care.

According to Dr. R. G. Brodrick, superintendent, Stanford University Medical School, San Francisco, in a paper read before the California Conference of Social Work: "Poverty compels the majority to seek institutions which, with few exceptions, offer only domiciliary care. Patients in the first two groups require specialized hospital care similar to that provided for patients with acute diseases whose stay is measured by days whereas the chronic patient may spend several months in an institution.

"Providing proper care for the chronic sick depends upon the end result sought. A comprehensive community program should include all groups of chronics, ambulatory as well as institutional. The ambulatory well-to-do patient can secure medical and nursing care either at home or in a special proprietary institution but the ambulatory patient of small means is dependent upon the out-patient department of hospitals. Many such patients may be kept out of hospitals and disruption of family life prevented by adequate dispensary care. Even patients who are disabled or bedridden need not enter hospitals when family ties prevent if organized visiting medical and nursing service can be obtained. There will always remain a considerable proportion for whom institutional care must be provided. It may be advantageous and humane to combine medical and custodial cases to eliminate the pathetic almshouses and homes for incurables."

Providing Hospital Facilities for Rural Communities

Approximately half of all counties in the United States lack reasonable access to hospitals. This is the startling statement made by Alma C. Haupt in the *American Journal of Nursing.*

More than 80 per cent of the rural population is as yet unprovided with official local health service approaching adequacy.

"How, then, is this problem being met?" Miss Haupt asks.

"One agency that is aiding in solving this problem is the Commonwealth Fund in its promotion of the rural hospital program," according to Miss Haupt. "The first need of the small hospital is an interested community which can be properly organized for financial support and for educational work in both preventive and remedial medicine. After organization comes finance. The Commonwealth Fund offers to pay two-thirds of the capital cost, provided the local board raises the remaining one-third and guarantees the maintenance. An average sum of $275,000 provides for a hospital building and equipment to care for fifty patients and a separate nurses' home housing about twenty persons.

"These fifty-bed hospitals serve a district approximately thirty-five miles in radius in which there is no town of more than 12,000 inhabitants. Every doctor within the district who is in good standing professionally is invited to become a member of the medical staff. Each hospital has a medical resident—a young doctor who has served his internship and who is anxious for a year of hospital experience. A graduate nurse staff is employed in the hospitals now in operation. There are excellent educational opportunities provided for both the staff physicians and the nurses.

"Perhaps the outstanding need of the small and rural hospital is the need for a public health program. An effective hospital program is one that teaches the people to keep well, makes possible immunizations and sends workers to follow up hospital patients with after care and education."

Making the Hospital Human Is Theme of New Book

Latest among hospital literature is the book, "The Soul of the Hospital," by Rev. Edward F. Garesché, S. J., who was for some time editor of *Hospital Progress.* The book is made up of articles that from time to time during the past two years have appeared in THE MODERN HOSPITAL, *Hospital Progress* and the *American Journal of Nursing.*

Father Garesché's gentleness of character, his high ideals and his spiritual kindness shine forth in every line of this little volume, and, while the book is written by a man with an intimate knowledge of the hospitals conducted by the nursing orders of the Catholic Church, it should be read by administrators in every type of hospital. Father Garesché has been able to restore to the institutions that care for the sick some of that charity and humanness, so apt to be lost when there is too much devotion to the more practical side of hospital management.

Father Garesché's book makes easy reading and his meditations should prove inspiring to those who peruse it.

Habit Clinic Is Organized at St. Luke's, Tokyo

A habit clinic has been organized by St. Luke's International Hospital, Tokyo, for the benefit of children graduated from the well-baby clinic which was started a year ago for babies born in the hospital. Classes are held for mothers in the training and physical care of their children of preschool age. The roll of the well-baby clinic now numbers more than 600 babies. A Japanese woman graduate of the University of Michigan, who for six years was assistant professor in the department of pediatrics of its college of medicine, is in charge of the clinic.

HOSPITAL EQUIPMENT AND OPERATION

With Special Reference to Laundry, Kitchen and Housekeeping Problems

Conducted by C. W. MUNGER, M.D., Director, Grasslands Hospital, Valhalla, N. Y.

A Successful Call System for Doctors and Interns

THE Graduate Hospital, University of Pennsylvania, Philadelphia, has a doctors' call system, worked out by the combined efforts of the executive, medical and nursing staffs, that appears to have more good points and fewer objectionable points than any system yet devised. It is a combination of the auto-call and a light signal system.

The problem that confronted the Graduate Hospital was to devise some method of calling twenty or more interns and forty attending doctors who might be in any part of a twelve-story patients' building, in the administration building or in the out-patient building. There were also the superintendent, the chief resident, the directress of nurses, the housekeeper and their assistants to call. The system takes care of all these needs in a comparatively simple manner.

A light signal annunciator board is installed on each floor at the end of the corridor, where it may be seen from any door. These annunciator boards are the expensive items in the system. Each board contains more than 100 numbers, each occupying a space of about two and a half by three inches, which was found to be large enough to be visible at the farther end of the corridor. This light board is connected with the main telephone switchboard and is under the control of the telephone operator.

How System Operates

An auto-call is installed on each floor, and it also is operated from the telephone switchboard. Its call box and the buttons for the light signals are at the telephone operator's left hand, set at right angles to the switchboard that she faces. The auto-call clapper used is the softest made. It gives a musical tone, distinct, yet not disturbing or alarming. If it is annoying to an unusually ill patient, each floor has a switch by which it may be shut off entirely.

The system operates as follows: The auto-call has but three calls, one stroke for interns, two strokes for executives and three strokes for attending physicians. It is so arranged that two calls may be alternated. The operator may set the call for both one and two strokes and thus call attention to the fact that both an intern and an executive are desired.

After the auto-call has been set going, the operator puts on the light signal number assigned to the persons wanted. For example, intern number ten and the chief resident, whose number is three, are wanted. Numbers three and ten appear on the light annunciator, while the auto-call gently strikes "one," "one-two," until it is answered.

The great advantage of this system is that several people may be called at one time. In practice, six interns and three or four attending physicians are often asked for simultaneously or in quick succession. The number called at one time is limited only by the numbers on the lightboard.

A call is answered at the nearest telephone. The operator informs the person called who is asking for him or what is wanted and makes the necessary connection. She instantly cancels the light number and stops the auto-call if it is not summoning someone else in the same class. This canceling takes but two movements of her hand.

The human element enters into the success of the scheme, since there are always some persons who do not listen for their calls or look at the annunciator as they pass through the corridors. A measure of experience and practice corrects the most of these delinquencies. It has been found that the executives, who are called least often, answer their calls promptly. The attending physicians, because they do not live in the house with the system, are those who most often fail to answer. Executives and interns often see and hear their signals almost subconsciously or automatically.

The assistant executives have the same call as their chiefs. Call and number are the same for the superintendent and the assistant superintendent; for the directress of nurses and the assistant directresses; for the chief resident and his assistant. This does not cause confusion, for if one person answers and finds himself not the one wanted, the operator merely keeps the signal on until the other person answers.

Occasionally it is found that a patient is annoyed by the auto-call, but usually an explanation of what it is adjusts the matter. If it does not, the auto-call is switched off temporarily at that floor by the supervisor in charge although the light signal still remains.

After a year of use in the Graduate Hospital the system has been found to be of the greatest value. Interns and executives could hardly get along without it. It relieves the main switchboard of much work.

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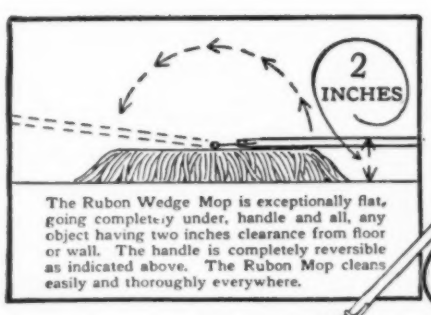

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of the auto-call, which seem to be as little annoying as any sound yet invented; the fact that any number of persons may be called at one time; the rapidity with which its calls may be made by the operator at the switchboard; the ease with which blame may be placed for an unanswered call.

A House Telephone System That Saves Time and Annoyance

In hospitals where a considerable number of telephones are necessary, the following plan has been found to work out satisfactorily:

Local, or house calls, are made by a dial system not connected with the main switchboard. For calls outside the hospital, the operator is dialed. She makes the required connection and reports on the call, as completed, busy or no answer.

The system is so arranged that no one can make an outside call except through the switchboard, a desirable feature. House calls may be put through the switchboard if necessary although ordinarily this is not desirable.

The advantages of this combination are: (1) It takes all the house business off the switchboard and thereby relieves the operator. (2) It enables persons in the house to make their calls more rapidly. Instead of waiting for the operator to answer the person calling, to ring the person or station wanted and to connect with the one who called, three processes, any of which may be interfered with and so delayed, there is but one procedure, that of calling the station desired. In practice, it has been found that three calls can often be made in the time formerly consumed by one. This saves not merely time, but also prevents irritation on the part of both the operator and the person making the call. (3) It does away with the necessity of two telephone systems, house and outside.

Choosing Electrical Equipment for the Modern Hospital

The maximum electrical installation in a modern, well equipped hospital falls into eleven main divisions, according to Frank E. Chapman, superintendent, Mt. Sinai Hospital, Cleveland. Not all of the equipment is essential to efficient hospital operation, says Mr. Chapman, but it is desirable, provided the institution is in a position to afford it.

The eleven main divisions as outlined by Mr. Chapman are:

1. *Illumination.* It is desirable that all stair hall, corridor and night lights be key controlled in order that definite responsibility for the lighting of these spaces may be assigned to specific individuals. For purposes of economy, corridor lights in long corridors may be installed on alternate circuits, in order that every other light may be turned on if desired.

In the x-ray department should be installed in the fluoroscopic room two systems of illumination, one for red or blue lights and the other for white. There is, of course, the necessity for the installation of special lighting fixtures in the operating room, delivery room, emergency room, dressing rooms and autopsy room.

A desirable standard height for base plugs is thirty inches above the floor line, with the exception of the

Calloway Hospital, Fulton, Mo.

Hospitals know the worth of

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FOR easy, thorough and economical cleaning of tile, marble, terrazzo or composition floors hospitals know there is nothing that quite equals Midland TILEOLEUM. Tileoleum penetrates—it gets right down into the pores of the floor and loosens deeply imbedded dirt and grime. Ordinary cleaners simply wash the surface, never touching this hidden dirt. Its economy has been proven by countless tests and comparison with other methods. Tileoleum is the one cleanser which does a better job at a lower cost. Just try TILEOLEUM on your tile floors, you will immediately perceive the difference.

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laboratories and facilities of a comparable type, where the base plugs should be located six inches above the work benches.

A determination of the type of general illumination in the building necessitates the division of the hospital into various services. Rooms of patient occupancy should have indirect lighting, with the acute illumination at the bedside. Corridors may be semidirect or direct. Stair halls, as a general rule, should be direct.

In rooms of patient occupancy, consideration should be given to the installation of telephone and radio service and at least two utility plugs, one for the bedside reading lamp and the other for general utility purposes. A decision as to the desirability of installation of electric fan outlets in strategic points in rooms of patient occupancy and other parts of the hospital must be made.

Emergency Lighting Service Desirable

There is always the necessity of serious consideration being given the installation of an emergency illuminating service. This need expresses itself primarily in the operating rooms, delivery rooms and services of a comparable type. The code requirements in some communities require the location of emergency service in stair halls and in corridors. There are on the market several installations that automatically throw on emergency illumination in the event of the general service failure.

2. *Power.* Special power facilities must be provided for the x-ray department.

With the labor saving devices in the general kitchen equipment separate power conduits should be provided. It is incorrect to take these services from the illuminating circuits. A like comment may be made with reference to the laboratory and also the utility rooms on wards, if any sterilizers are to be run by electricity.

The development of electric cooking equipment in the last few years demands serious consideration of this type of installation, with the consequent necessity of providing special service for the equipment, if it is to be installed. It is, of course, to be assumed that the laundry and power building are serviced separately.

3. *Nurses' Call System.* Standard equipment on the market offers such a degree of flexibility as to warrant little discussion. The only point presented is that this system must be installed in a separate conduit because of its difference in voltage from standard circuits.

4. *Paging System.* A determination of the type of paging system to be installed, whether a light system (either fixed or flasher), bells, gongs or loud speaking telephones, is necessary. The proper location of outlets is predicated upon the type of system to be installed, and the inclusiveness of the service to be rendered.

5. *Telephone.* Bear in mind that an adequate telephone coverage in an institution will save many times the cost of its installation in a few years of operation. The correctness of a separate house system of intercommunicating telephones is debatable. In all probability service through a central exchange with a private branch exchange in the hospital will offer, both from the standpoint of operating cost and unquestionably from the standpoint of efficiency, the best installation.

6. *Fire Alarm System.* This is not a requisite in Class A buildings in some communities, but it is in others. Reference to the local building codes is indicated in determining the extent to which such a system must be provided.

7. *Call Bells.* Call bells from the front door and the emergency and ambulance entrance by all means is indicated, these bells centering at the telephone switchboard

in all probability. In some instances it would seem desirable to locate emergency bells quite separate from the nurses' call system, from each of the public baths and toilets to the head nurse's station.

8. *Time Stamps and Payroll Clocks.* Such a system has a doubtful value in a hospital. There are some institutions, however, that demand it.

9. *Doctors' Register.* Such a system, registering at the telephone room from a button board in the doctors' cloak room is a highly desirable installation.

10. *Clocks.* A properly synchronized clock system operating from a central master station insures a uniformity of time throughout the institution.

11. *Electrocardiograph.* This installation must be discussed in institutions demanding this type of service. Apparently the wiring of various nursing units for electrocardiographic service has not proved satisfactory. There is the need, however, for a discussion of this service, and the determination of whether there shall be a stationary heart station with separate system of conduiting to service this station, or whether electrocardiographic work will be done by a portable machine. In all events proper care must be taken to provide protection against electrical interference from other systems in the institution.

New Bed Bumper Is Easily Applied

Recently a new bed bumper was placed on the market which is said to be a vast improvement over the old style bumper, and which embodies a number of new features. In shape the bumper is similar to a doughnut, and is designed for square, round or grace line tubing on hospital beds. The bumper is split so that it may be applied at any desired point without having to remove the casters. Imbedded in the bumper is a split steel ring with an adjustment screw so that it can be securely anchored in any position. The bumpers have proved effective in protecting beds, doorways walls and baseboards from damage when it became necessary to move the beds, or when the beds were accidentally jarred.

New Pressure Tank for Filling Grease Guns a Time Saver

The inconvenience of filling a grease gun by hand need no longer be tolerated in institutions where machinery is greased by pressure. A new nozzle filling gun and specially made pressure filling tank have recently been made available. With this combination it is possible to fill quickly the empty gun without having to take it all apart and possibly spill the grease in the procedure.

The filling tank is equipped with a pressure pump and a nipple similar to the nipples on the machines to be greased. It is only necessary to attach the nozzle of the gun to the nipple of the tank, unscrew the locknut on the plunger of the gun and pump the grease into the gun from the tank. When the locknut on the gun is tightened, it is ready for use. Specially made nipples and pressure oil cups with nipple attached can be provided if they are not already installed on the machine.

This method of filling the grease gun is not only quicker and cleaner, but it prevents the grease from being exposed to the air where it might pick up particles of dirt that would prove injurious to the greased surfaces.

Effecting Economical Heating by the Use of Domestic Stokers*

When the question of the economical production of power began to receive serious consideration, the first efforts were along the line of savings in the use of steam and led to the development of improved steam prime movers and auxiliary equipment. However, the old methods of hand firing still remained, until a realization of the economies possible in the generation of steam resulted in the development and use of mechanical means of firing.

In the heating and ventilating field, history seems to be repeating itself; the devices and systems offered by manufacturers to effect economical heating are many, but until very recently the janitor and the coal scoop still held full sway.

Development of Power Stokers

The advent of oil and gas burning has stimulated the installation of equipment for automatic firing devices, this applying to both kinds of coal as well as to fuel, oil and gas. The full convenience of fluid fuels can only be realized in part by the use of coal, as the supplying of coal to the hopper and the removal of ash still will require manual attention. Nevertheless, the advantages of automatic feed of coal to the furnace as required, and freedom from smoke nuisance readily can be secured by the use of coal in a properly designed stoker.

Domestic stokers have been developed from the experiences with stokers in the power field, and an outline of power stoker development will be of interest and value.

A general classification of these stokers divides them into three types: the underfeed stoker, the chain grate, and the inclined grate type. Each has its special advantages, depending on the type of service to be performed as well as the class of coal to be handled.

Jones First of Underfeed Stokers

The ancestor of the various underfeed power stokers now on the market is the old Jones underfeed. It is of historical interest that this stoker was developed in a wood burning section, Portland, Ore., and first was used to fire slab wood under a power boiler. At the time of the World's Fair in Chicago this stoker was brought to that city, its original design much changed, and was installed for coal burning service. It was a novelty and the pioneer period, one of many tribulations, was finally crowned with success, both mechanical and commercial.

Following the advent of the Jones, another stoker appeared on the market, then known as the American. These stokers are much alike except that the latter used a screw feed instead of plunger feed, this being due to the fact that the plunger method was covered in the Jones' patent. These stokers were built for capacities ranging from 180 to 200 boiler horse power per retort. To meet the requirements of larger boilers a number of stokers were installed side by side in one furnace.

The next step in the evolution was the modification of the Jones retort type, the present day stoker so universally used in the power plants with many retorts.

As the Jones stoker was the foundation upon which many of the large power stokers of the present day are based, so is it the basis upon which a number of the smaller sizes of stokers are designed. They either are a

*From an article by William D. Edwards in the Heating and Ventilating Magazine.

direct offspring of the Jones or are descendants of Jones' eldest child—the American.

A stoker built for heating boilers is now on the market, designed with capacities ranging from 1,000 to 20,000 square feet of steam radiation with hopper capacities from 350 to 900 pounds of coal. Well adapted to the burning of bituminous coals, either bituminous or lignite screenings can be burned. The cast tuyeres are the only parts exposed to the heat, and these are cooled by an air blast from the same fan that supplies the mechanical draft. Air is forced into the closed ash pit and from there is fed to the fire through the slotted cast iron blocks, or tuyeres, on top of the retort. Since one motor drives both the fan and coal feed, the relative proportion of coal and air is kept constant regardless of its speed, which is adjustable. Domestic stokers of this type usually are equipped with thermostatic control, both from the room and from the boiler.

Designed to Burn Small Sizes of Coal

Another stoker is designed to burn the small sizes of anthracite coal—buckwheat and rice. Coal falls, by gravity, from the hopper to the screw, which is driven from a ⅛ or 1/6 h. p. electric motor. The screw carries the fuel into the firepot, which is used in place of the customary grates. As the coal is burned, the ashes are guided by flanges to the ash worm which conveys them out of the furnace to a dustproof can. An adjustable clutch controls the amount of coal fed. Stokers of this make are available in sizes with capacities from 600 to 1,000 square feet of steam radiation. It is manufactured in three sizes, the smallest of which also can be used in warm air furnaces, with capacities under 1,000 square inches of leader pipe. Depending on the size of stoker, the hopper holds either 300 or 500 pounds which, in a domestic installation, would last for some time. This stoker also can be purchased for domestic water heating installations.

Another type of stoker descends automatically from the Jones, as it has the plunger feed. It is automatically operated by water pressure which can be so regulated that the proper amount of coal will be fed from the hopper into the retort. Here it is gradually pushed upwards into the hot coals on the grate. This stoker is equipped with thermostatic control.

How the Small Boiler Stoker Works

Inclined grate stokers have a descendant in the small boiler stoker. This stoker is available for boilers of medium rather than small size, and can be either hand or power operated. When operated by power, a hopper is placed in front of the boiler, the fuel being pushed into the firebox by a piston driven through a cam shaft by an electric motor. In accordance with the best practice in burning bituminous coal, for which this stoker particularly is adapted, a refractory arch divides the combustion chamber into two parts, the upper, front one, being for the distillation of the green coal, and the rear, lower part, for the burning of coke. The lever that operates the movement of the grates, causing the coal gradually to move down the incline, can be worked by hand, if desired. In the fire brick arch there are passages through which the volatile gases are driven off and consumed. Any clinkers that gather on the lower portion of the grate, called the ash dump, are discharged by means of the lever into the ash pit.

For heating duty in connection with the buildings of large size, such as office buildings or apartment houses, with boilers ranging from 100 h. p. up, power stokers can

. . . . they never invited him again!

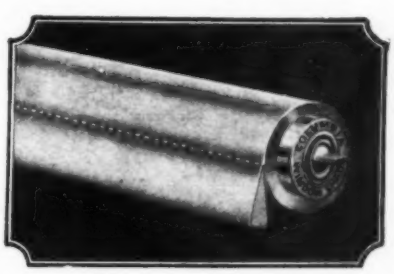
How a window shade roller ruined the social career of W. Winternitz

WILLARD WINTERNITZ was in the seventh heaven. At last, he had been invited to tea at the Van Allrich's—and Mrs. Van was showing him her famous collection of Early American furniture and glass.

"Oh, do let me put up the window shade," cooed Willard, "we need more light on this lovely bit of Stiegel glass."

He touched the shade. Bing!—up it flew to the ceiling. The cord wrapped itself around the roller.

"Let me fix it," cried the gallant Winternitz. As lightly as a lad of two hundred odd pounds can spring, Willard sprang up on a rare Hepplewhite chair. ! * ! * ! * The rest is silence . . .



Don't wait until everybody's patience is exhausted with those old style rollers (the jumpy, squawky kind) in your hospital. Any good department, house-furnishing or window shade store will estimate on the new *Columbia* Rollers—the kind with 30% to 40% reserve power—nickel plated ends—RUST-PROOF — self-lubricating bearings that are QUIET.

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GUARANTEED

WINDOW SHADES *and* ROLLERS

readily be adapted as they now are built with electric motor driven plungers replacing the steam actuated plungers, thus permitting their operation under low-pressure steam or water plants.

For boilers above 50 h. p., either high or low pressure, a stoker adapted especially for heating plants recently has been placed on the market. This is a modification of the chain grate stoker that has been popular in the power field. Either anthracite or bituminous coal can be burned with this stoker, which, differing from the usual chain grate stoker, has no ignition arch. It is this construction, making the arch unnecessary, that permits it to be used in heating boilers where the headroom usually is low. A magazine hopper is provided from which coal is delivered to an overfeed grate section. Coal thus is introduced on top of the burning fuel so that it ignites from the bottom. After ignition the chain grate removes the fuel from this section, carrying it under the leveling pipe which strikes off the fuel bed and determines its thickness. This leveling pipe is made of a special chrome steel alloy, and is either air or water cooled as desired. By the time the coal reaches the end of its travel it is burned out, having been gradually consumed. Ash is deposited in a shallow ash pit from which a conveyor deposits it in a can in the ash storage bin. Air pressure in the windbox under the stoker for the forced draft, varies from a maximum in the first or ignition zone in the front to lower pressure in each succeeding zone. Dampers are provided so that the amount of air in each zone can be separately adjusted to meet the requirements of that zone. Not only the small sizes of bituminous and anthracite coals can be burned but coke breeze can successfully be consumed.

Practically all of the small stokers, as well as the larger sizes, are automatic in operation, both coal and air supply being controlled by the steam pressure, or temperature of the water in the case of a water heating system.

It will be noted that the greater number of the small stokers are designed on the underfeed system and retain the closed retort and forced draft air supply through the tuyere openings at the upper part of the retort; however, the method of coal feed to the furnace seems to be mainly divided into two schools, the ram plunger feed and the screw or worm feed, with the chain grate stoker rapidly gaining favor.

Green Light for Locating Nurse Is Innovation

An innovation in the Jewish Hospital, Cincinnati, is the method of locating the student nurse. This is accomplished by the use of a green light outside each patient's door.

As the pupil nurse enters the room, she pulls the chain attached to the lighting fixture, lighting the lamp. She may be in the room indefinitely but the green light tells of her whereabouts. These lamps have been placed outside each door, and the method in vogue has added to the efficiency of the hospital.

It frequently happens in hospitals that the floor is without nurses, since they may be in the diet kitchen, utility room or patients' rooms. The usual method of locating the nurse is by the ringing of a bell which is disturbing to the patients. This is now avoided by the use of the signal lamp at each door.

The plan was originated by Louis C. Levy, superintendent of the hospital.